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NATIONAL ELECTRAGIST

FORMERLY ELECTRICAL CONTRACTOR-DEALER

(ELECTRAGIST--Trade Mark)

Vol. 21, No. 2

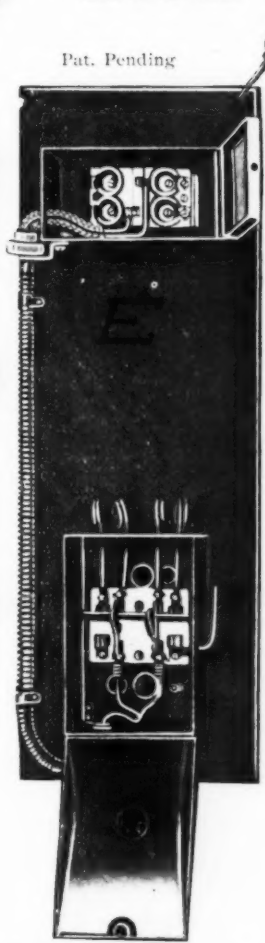
Official Journal of National Association of Electrical
Contractors and Dealers

DECEMBER, 1921

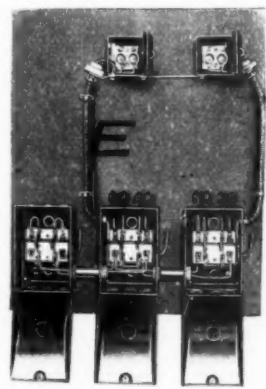
NAIL UP A **E** READY UNIT METER BOARD
for
Efficiency and Economy

The
RED-E-UNIT
A
COMPLETELY ASSEMBLED
METER BOARD
READY
FOR INSTALLATION

Pat. Pending

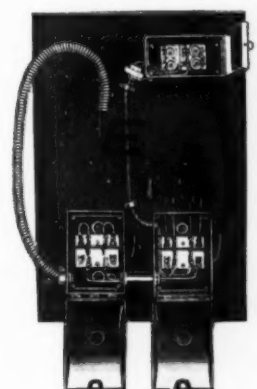


Approved in every locality.
Constructed to meet all
installation requirements



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MANUFACTURED BY
BAUM ELECTRIC CO.
NEWARK, N. J.
H. Q. FISHER
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For Installations
From One to Six Meters

Gravity and Electric Re-set Annunciators can be furnished in any capacity, mounting and finish. They are well made, low in price and will give satisfaction.



GRAVITY
ANNUNCIATOR
No. 369



APARTMENT HOUSE



PR "MARLO"
BELL

PR "Eclipse," "XXX" and "Marlo" Bells and Buzzers, with 2½", 3" or 4" Gongs, are specially suitable for apartment house signal systems. Their strong construction insures continued service.

INTER-TALK TELEPHONE SYSTEMS

are the result of long manufacturing experience and diligent studies of present day requirements. The apparatus are of rugged construction and design—Easy to install and to connect—Reliable in operation.



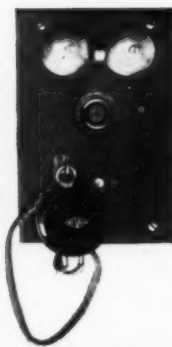
VESTIBULE
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JANITOR'S
STATION
NO. 2813



FLUSH VESTIBULE TELEPHONE
TYPE NO. 2509 N
WITH 3 OR 4-NEST LETTER BOXES



FLUSH
SUITE STATION
NO. 2530



WALL
SUITE STATION
NO. 2524

Manufacturers of
FARADAY Signal Gongs
and Fire Alarm Systems,
DeVEAU Telephones, An-
nunciators, Push Buttons
and Signalling Systems,
PATTERSON Battery Sets
and Specialties, PR Bells
and Buzzers
Information on any of the
above sent promptly upon
request



DEVEAU PERFECTION
MIDGET TYPE
PUSH BUTTON NO. 5A

Manufacturers of
FARADAY Signal Gongs,
and Fire Alarm Systems,
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nunciators, Push Buttons
and Signalling Systems,
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and Buzzers
Information on any of the
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STANLEY & PATTERSON

WEST & HUBERT STREETS
NEW YORK



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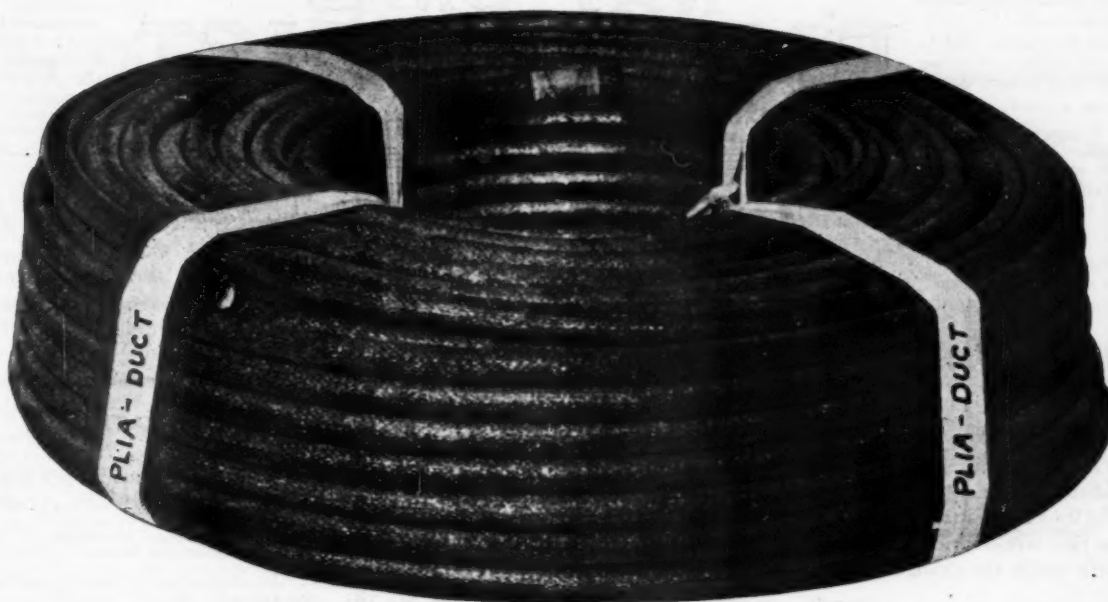
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PLIADUCT

For Faster Fishing

The "*slick as silk*" inside surface of *PLIADUCT* means faster fishing—even where there are longer runs and more bends. And that means lower labor cost and increased ability to handle rush jobs right.

Samples on Request

SHORT ELECTRICAL MANUFACTURING CO.

WILLIAM HANDLEY, GENERAL MANAGER

General Sales Offices: 3-5 Waverly Place, New York City

Chicago Office—9 South Clinton Street
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524 1st Ave. S., Seattle, Wash.

FOSTER CALLAGHEN,
237 Brown-Marx Bldg., Birmingham, Ala.

KEMP HAYTHORNE
333 McKinley Ave., San Antonio, Tex.

THE RESOLUTION

Whereas, There is need of words to designate our business and activities; and

Whereas, It is proper that we should deliberately add to our vocabulary such properly derived words as are required; now therefore, be it

Resolved, That the following words be adopted as recognized by us with the meanings attached: (See opposite).

FARQUSON JOHNSON
Editor and General Manager

NATIONAL ELECTRAGIST

FORMERLY ELECTRICAL CONTRACTOR-DEALER

(Trade Mark)

The Official Journal Published Monthly by the National
Association of Electrical Contractors and Dealers

THE NEW WORDS

Electragy—Name of the trade or business of Electrical Contractor-Dealer.

Electragist—A person conducting such a business.

Electragician—A person working at the business.

Electragize—A verb—to work at the business—or to provide electrical equipment.

Electragic—An adjective—relating to the business.

Electragian.

Electragial.

JAY S. TUTHILL, News Editor
G. W. HAUPTLI, Advertising

Volume 21

DECEMBER, 1921

Number 2

TO OUR READERS

All matter for publication must be in the hands of the Editor by the 10th of the month preceding publication.

All changes in our mailing list should be received by us two weeks prior to date of publication of the issue with which the change is to take effect.

TO OUR ADVERTISERS

Changes in advertisements and all advertising copy should reach our office not later than the TENTH OF THE MONTH previous to the date of issue.

SUBSCRIPTION RATES

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Single Copies.....20 cents

Copyright, 1921, by The National Association of
Electrical Contractors and Dealers.

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PUBLICATION OFFICE:

11 Liberty Street, Utica, N. Y.

Editorial and Business Office:

15 West 37th Street, New York City

Table of Contents and Advertising Index Next to Last Page

PITTSBURGH
THREAD PROTECTED
ENAMELED CONDUIT
STANDARD
PATENTED

Cutting the Cost of Conduit Installation

YOU DO NOT NEED to figure it out, you can tell in an instant that there is a big saving to be gained by the use of Pittsburgh Standard—the patented Thread Protected Enameled Conduit.

P. S. reaches the job ready to install. Costs no more than ordinary enameled conduit.

The threads are sharp, true and clean—with just sufficient enamel to protect from rust. You never need put Pittsburgh Standard in a vise.

The time it saves, the fast work it makes, is a direct means of cutting the cost on every job you install.

ENAMELED
PITTSBURGH, PA.
METALS CO.

The Hall of Ten Thousand Buyers

NEVER in the history of the lighting fixture industry has there been such a business opportunity as will be offered by the great Fixture Market to be held by the National Council of Lighting Fixture Manufacturers, at Milwaukee, January 30 to February 4, 1922.

Extensive building programs—more stabilized industrial conditions—greater confidence in the prosperity in store during 1922—all these signs point to a healthier trade condition than this country has seen for years.

Are you a buyer of Lighting Equipment?—At the Milwaukee Fixture Market more than one hundred and fifty of the leading makers of lighting fixtures, portables, illuminating glassware, and lighting appliances and novelties, will be represented. The best designs the country affords are available for you to select from.

Are you a manufacturer? Buyers from New York to Seattle, from Canada to Mexico, and all points between, will be present to replenish their stock for the coming year. In this, the greatest annual event of the Fixture Industry, the National Council offers you a unique opportunity to get in personal touch with your present customers, and to secure new ones.

To all who are interested in better lighting and fixtures, the National Council extends a cordial welcome to the greatest Lighting Fixture Market in the world.

WRITE FOR FULLER DETAILS TO



Interior of Milwaukee Auditorium, where the 1922 Fixture Market Luncheon will be held.

Come to Milwaukee Jan. 30-Feb. 4

JOINT CONVENTION—

National Council Lighting Fixture Manufacturers, Lighting Fixture Dealers' Society of America and Illuminating Glassware Guild.

FIXTURE MARKET—

The Greatest Display of Fixtures, Shades, Portables, Lighting Novelties and Appliances, Illuminating Glassware.

BETTER LIGHTING WEEK—

A wonderful city-wide public demonstration of the Advantages of Better Lighting, and concluding with the marvelous "Pageant of Light."

**Reserve Your
Booth-Space
NOW!**



Charles H. Hofrichter, Secretary

The National Council Lighting Fixture Mfrs.

Headquarters, 231-233 Gordon Square Building
CLEVELAND, OHIO

President, F. R. Farmer

Vice-President, William Horn

Treasurer, B. F. Klein

Insurance at Cost

THE POLICY

of Lynton T. Block & Co. is to issue the most satisfactory and comprehensive insurance to be had anywhere—

Furnishing absolute protection at cost.

Embodying all the standard features and more.

Covering special classes and selected risks.

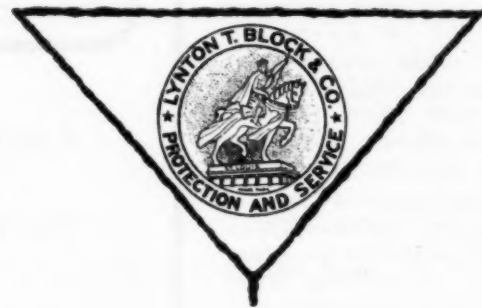
Selling at established rates.

Returning savings at the end of the policy period, depending on the individual experience of the risk.

Giving a claims service that is not equalled elsewhere.

It is an honest policy, carried out in an honest way and gives a square deal under all conditions.

This forms the creed of every member of the organization and has built up the reputation of Lynton T. Block & Co. until it is one of the best and most favorably known in the Mississippi Valley.



Workmen's Compensation
Employers' Liability
Public Liability
Teams' Liability
Contractors' Liability
Elevator
Automobile
Fire Insurance



LYNTON T. BLOCK & CO.

Underwriters

of

Insurance at Cost

Utilities Indemnity & Fire Exchanges

Employers Indemnity Corporation

Chamber of Commerce Building,

St. Louis, Mo.

You Can Do It!

The record shown here proves that during the slackest part of an off year, electrical appliances have maintained a sales volume greater in proportion than most commodities included in general merchandise.

Twenty-five central-station companies in Pennsylvania, not including any of the large cities, sold in the first seven months of this year 3,000 flatirons, 500 washers, 1,300 cleaners and small appliances to make a total of 6,200.

Twenty central-station companies in Texas, not including any large city, sold in the same period 1,200 flatirons, 230 washers, 700 cleaners and small appliances to make a total of 10,000.

Ten central-station companies in Kansas, including no large city, sold in the same period 810 flatirons, 450 washers, 415 cleaners and small devices to make a total of 2,850.

Twenty central-station companies in Utah, including one large city, sold in the same time 3,100 flatirons, 1,550 washers, 1,000 cleaners and enough other appliances to total 6,500.

Two central-station companies in Rhode Island, in small cities, have sold in eight months this year 1,485 flatirons, 200 washers, 435 cleaners and other devices to total 2,725.

A central-station company in a small city of Massachusetts has sold through August 2,690 flatirons, 63 washers, 487 cleaners and devices to total 4,777.

A central-station company in Maine has sold through August 2,534 flatirons, 209 washers, 413 cleaners and other appliances to aggregate 3,502.

One of the large Middle West utilities reports that range sales for the first six months this year were 20 per cent greater than for the entire year of 1920 and that range connections will be 30 per cent more.

Appliance sales by electrical contractor-dealers are aggregating a tremendous volume.

—Reprinted from *Electrical World*, October 8

Electrical appliances and electrical equipment contribute to domestic and industrial economy. That is why, in a period otherwise "off," the sales volume of electrical conveniences are comparatively high.

Students of conditions assure us that affairs in general are improving. Holiday trade will add a quickening impulse. With better business, however, thrifty habits will undoubtedly prevail, and electrical things will be appreciated accordingly.

While the figures given here show what central stations have done, they indicate clearly what the dealers, also, may do. As a matter of fact, a recent jobber-dealer-central station campaign in a large Eastern city proved conclusively that the dealers more than held their own in volume of sales on identical apparatus.

Concentrate on sales. Leave your purchases to headquarters in the service of supplies. Quick delivery from jobbers' stocks is the business brother of liquid inventory and frequent turnover.

Ask your Electrical Supply Jobber.

Electrical Supply Jobbers Association

Instant Display

Lighting glassware of the highest quality is now available in convenient, attractively-labeled cartons ready for instant display. For this IVANHOE package is plainly marked, easily found, and the shades inside are clean and ready for inspection.

But more valuable than this, from a merchandising standpoint, is the display value of the carton itself. Many IVANHOE buyers have been "sold" on the line, through the display advertising of the package alone. You should certainly share its advantages.

IVANHOE-REGENT WORKS of General Electric Co.
Cleveland, Ohio

"Ivanhoe" Steel Reflectors, Lighting Glassware, Anderson Self-Adjusting Arms, and Illuminating Service.



"SERVICE TO LAMPS"

IVANHOE

GLASS SHADES - STEEL REFLECTORS

Denzar Photographed By Its Own Light

THE upper part of this advertisement shows a view in the new offices of the Wilson-Jones Loose Leaf Co., Chicago, where 113 No. 1 Denzars were installed by the Wm. A. Corrao Electric Co., also of Chicago.

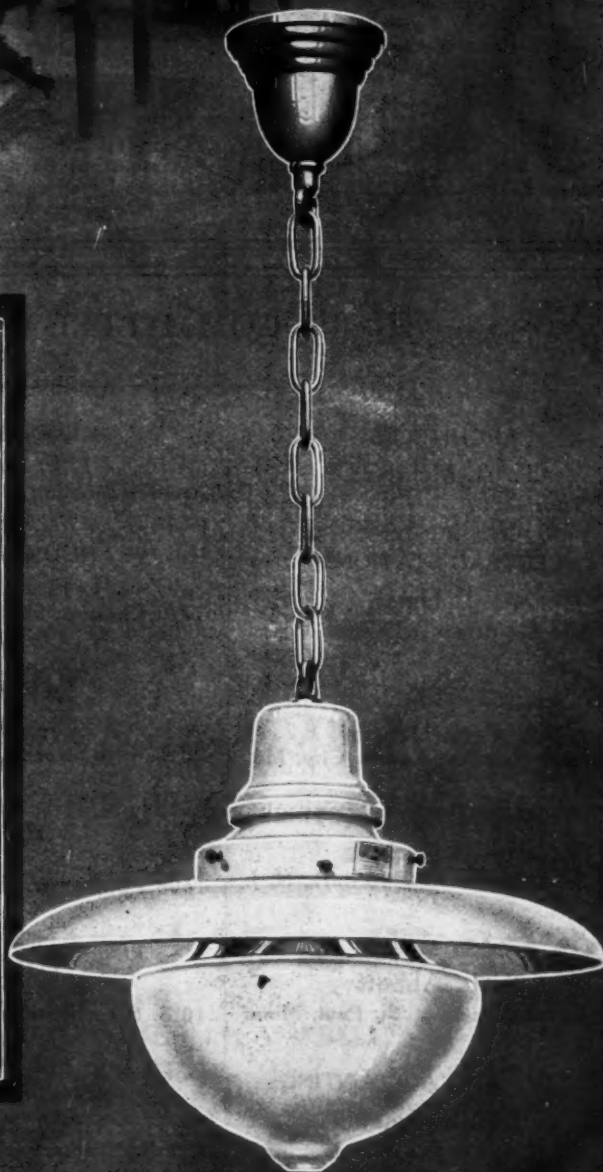
The photograph was made with no other light than that furnished by the Denzars, and is reproduced here without any retouching. Note particularly the evenly distributed light on the tops of the desks and the softness of the shadows below them.

Denzar is successfully lighting many offices—not a few of which are those of nationally prominent firms. You as a lighting expert can secure orders like this one in your town. If you have a prospect now, bear this in mind, Denzars may be secured for immediate delivery, as the factory stock is very complete. If you want any Denzar literature or other help, just write:

Beardslee Chandelier Mfg. Co.

231 South Jefferson St., Chicago, Ill.

DENZAR



National Association of Electrical Contractors and Dealers

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James R. Strong-----1905-1908

Gerry M. Sanborn---1908-1910
*Marshall L. Barnes---1910-1912
Ernest Freeman-----1912-1914
*Deceased.

John R. Galloway-----1914-1916
Robley S. Stearnes---1916-1918
W. Creighton Peet---1918-1920

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CODE

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34 Cherry Street, Detroit, Mich.

UNIVERSAL DATA AND SALES BOOK

J. A. Fowler
10 S. Second Street, Memphis, Tenn.

U. S. CHAMBER OF COMMERCE

Robley S. Stearnes
336 Camp Street, New Orleans, La.

ANNUAL CONVENTION, CINCINNATI, O., OCTOBER 11, 1922. EXECUTIVE COMMITTEE MEETING, MARCH 13, 1922

Reservations Now Being Made for

America's Second Home Beautiful Exposition

Mechanics Bldg., Boston, Mass.,
APRIL 15 to 29, 1922

125,000 Square Feet of Floor Space

Finest Exposition Building in the U. S.

Five Mammoth Halls

Three Orchestras

Varied Attractions

Everything for the Home

Including an Actual House, Completely Furnished

This Exposition affords an excellent opportunity for the manufacturers of Electrical and Allied Products to display their goods to the public.

To obtain space preference early reservation is essential

This Exposition will Appeal to All

Instructive

Scientific

Beautiful

Entertaining

Remember the Date: April 15 to 29, 1922

Under Personal Direction of CHESTER I. CAMPBELL
Executive Office, 5 Park Square, Boston, Mass.



Now-\$1.35

BENJAMIN

Products for Holiday Trade

Put only Quick Sellers in Stock
and Have a Heavy Purse and a
Light Heart at the end of the year.

The Original Two-Way Plug

has always been a leader. No. 292,
with the Pull Chain, which allows the
light to be switched on or off without
disturbing the other appliances and
priced to please the thrifty, will go big-
ger than ever. Your
Holiday Stock is in-
complete without

this and No. 92—another big seller—now \$1.00.

Stand Lamp Clusters —



Whether you assemble the Stand Lamp your-
self or Buy it Complete, see that it is equipped
with Benjamin Clusters.

The Wireless Cluster (on the right) groups
the lamp receptacles into a neat compact casing.
Easily wired.

In the Adjustable Cluster, the Pull Chain
Sockets are adjustable to any angle—for any
depth of shade.



We will be glad to send you a handsome assort-
ment of wall hangers, posters, window display
stands, easel counter cards, etc., to help you
dress your holiday windows.

Write to our nearest office for full information.

BENJAMIN ELECTRIC MFG. CO.

247 W. 17th Street
NEW YORK

847 W. Jackson Blvd.
CHICAGO

580 Howard Street
SAN FRANCISCO

Mr. Electrical Contractor:

TO some folks, the Columbia Safety Switch will be just "another safety switch."

But not to the live electrical contractor who has used safety switches before—he knows where the logical and most convenient place is for every feature—and just where he should expect to find it.

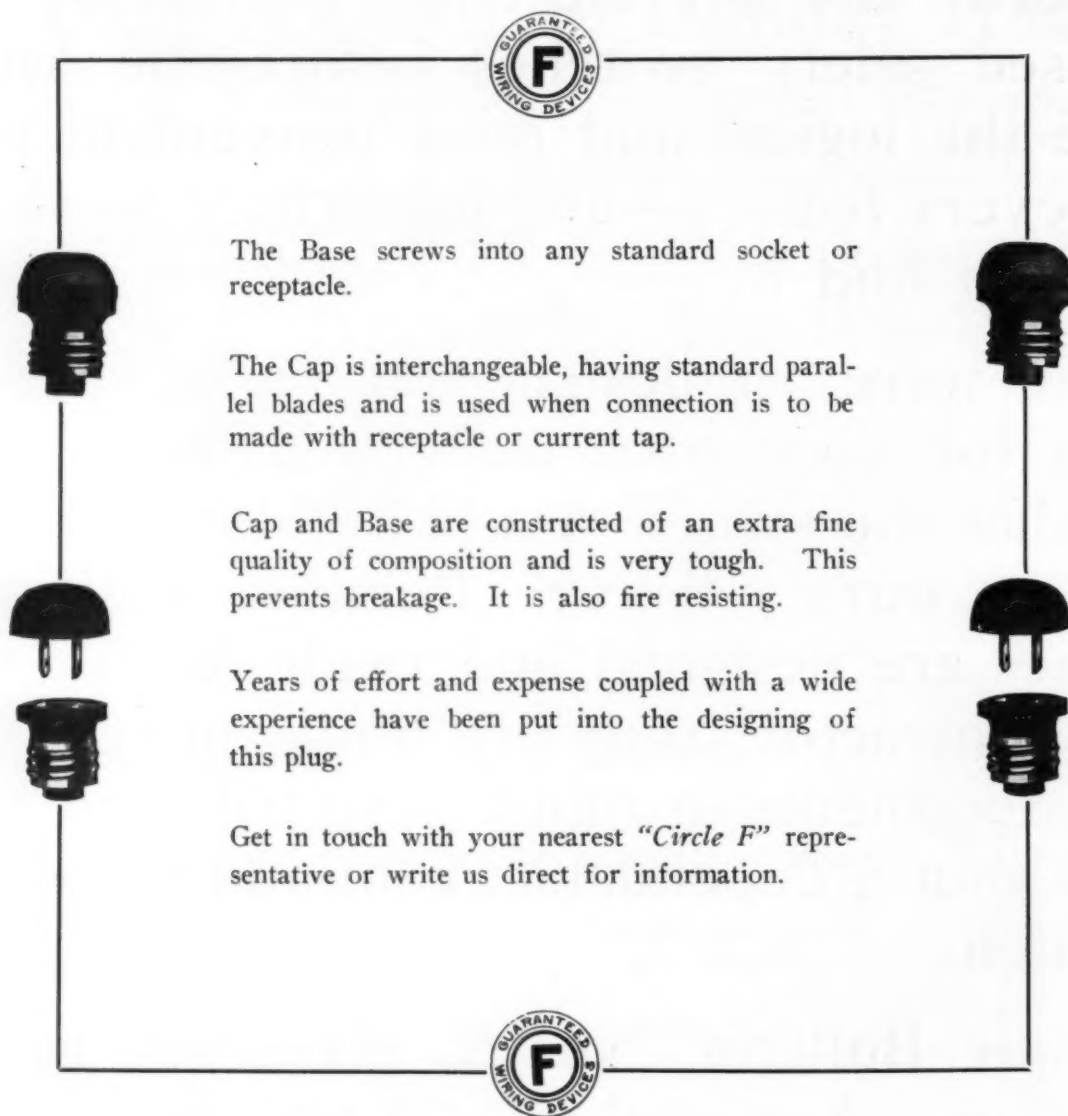
If you were to design and make a safety switch for your own individual use, we believe that the switch would be identically the same as ours. Why? Because Columbia switches are designed and made *for* the electrical contractor; they are built entirely with his requirements in mind. No frills, no trimmings—but a dependable, common-sense safety switch.

Our new Bulletin, No. 22, gives you full information. A special offer is now being made on the two most popular sizes, which is of real interest to you.

If you have not yet received your copy, write for it today. Columbia Metal Box Company, 226 East 144th Street, New York City.

"Circle F"

Two-Piece Attachment Plug



The diagram illustrates the 'Circle F' Two-Piece Attachment Plug. It features a central rectangular frame with a circular logo at the top and bottom center. The logo contains the letter 'F' and the words 'GUARANTEED WIRING DEVICES'. On the left and right sides of the frame, there are two sets of components. Each set consists of a 'Base' (a screw-in socket) and a 'Cap' (a two-pronged attachment). The 'Base' is shown at the top of each side, and the 'Cap' is shown at the bottom of each side. The 'Cap' is designed to be interchangeable with the 'Base'.

The Base screws into any standard socket or receptacle.

The Cap is interchangeable, having standard parallel blades and is used when connection is to be made with receptacle or current tap.

Cap and Base are constructed of an extra fine quality of composition and is very tough. This prevents breakage. It is also fire resisting.

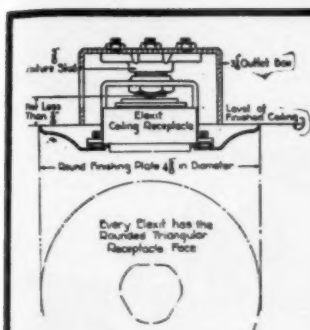
Years of effort and expense coupled with a wide experience have been put into the designing of this plug.

Get in touch with your nearest "Circle F" representative or write us direct for information.

E. H. Freeman Electric Company
Trenton, New Jersey

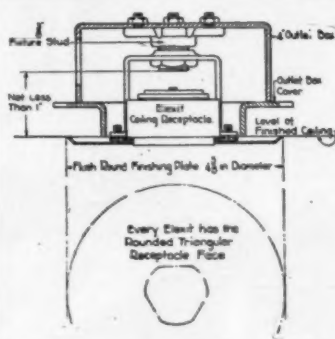
Manufacturers of "Circle F" Wiring Devices

Agencies in all principal cities



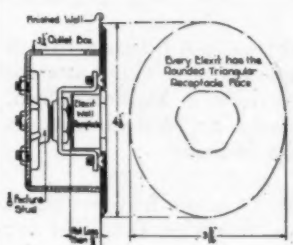
CEILING ELEXITS

Every ceiling outlet box should have $\frac{3}{4}$ " fixture stud, and end of stud should be at least $\frac{3}{4}$ " above finished ceiling level. Elexit Receptacles can then be installed at any time.



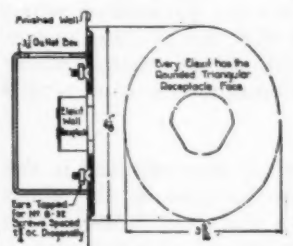
CEILING ELEXITS

If the $\frac{3}{4}$ " fixture stud is at least 1" above finished ceiling level, Elexit Receptacles may be installed flush as illustrated above.



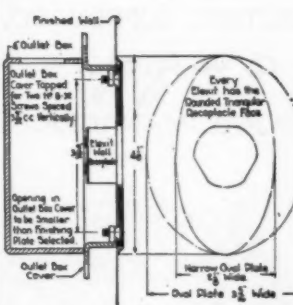
WALL ELEXITS

If wall outlet boxes have $\frac{3}{4}$ " fixture studs, the end of each stud must be at least $\frac{3}{4}$ " back of finished wall. An Elexit Receptacle can then be installed at any time.



WALL ELEXITS

Wall outlet boxes and box covers are often tapped for 2 No. 8-32 screws, spaced $2\frac{3}{4}$ " apart, center to center, and arranged diagonally. Elexit Receptacles may be installed by using these screw holes.



WALL ELEXITS

If wall outlet box covers are tapped for 2 No. 8-32 screws spaced $3\frac{9}{32}$ " apart, and arranged vertically, Elexit Receptacles may be installed by using these screw holes. If the openings in such box covers are sufficiently narrow, the Elexit Receptacles may be finished with a "narrow oval" plate as illustrated.

* "Elexit" is a name-word coined to describe any electric lighting outlet finished with an Elexit Receptacle, which may be recognized by its rounded triangular face. Any lighting fixture, properly fitted with an Elexit Plug, becomes an "Elexilier" and may be plugged into an Elexit, or moved readily from one Elexit to another. Wall Elexits also take the standard attachment plugs which now come on practically all electric appliances.

* Elexits

"Places for Lights"

Advance Information for Those Who Build

In 1922, lighting outlets in properly wired buildings will be Elexits. Each outlet will be finished with an Elexit Receptacle and Plate, so that an Elexilier (any lighting fixture with an Elexit Plug properly attached) may be plugged in for permanent or occasional use.

The manufacturers listed below have standardized Elexit Receptacles and Plugs for interchangeable use. An Elexit Plug will fit an Elexit Receptacle regardless of which licensed manufacturer makes either part. The accuracy of this standardization makes it possible to illustrate in advance of the actual quantity production, how simply the present types of outlets may be converted into Elexits, either before or after a building is completed. The essential thing is to observe the dimensions shown in the illustrations.

The Unusual Character of Elexit Standardization

Whereas most devices which should be interchangeable only become standardized after years of inconvenient use, Elexit Devices have been standardized at the outset by a number of competitive manufacturers, and all the customary confusion and inconvenience have been prevented.

Make sure that all lighting outlets in all rooms have outlet boxes set to conform to the dimensions illustrated, so that Elexit Receptacles can be installed when they are ready for distribution. You will then know that, in this respect at least, these rooms will be "modern" for the life of the building, and that all lighting and other electrical equipment used in them can be brought up to date with the greatest possible economy and convenience.

When Elexit Receptacles and Plugs are ready for the market the fact will be widely announced. In the meantime

Plan with Elexits in mind

The Arrow Electric Co.,	Hartford, Conn.	General Electric Company,	Bridgeport, Conn.
Benjamin Electric Manufacturing Company,	Chicago	The Hart & Hegeman Mfg. Co.,	Hartford, Conn.
The Bryant Electric Co.,	Bridgeport, Conn.	Harvey Hubbell, Incorporated,	Bridgeport, Conn.
The Cutler-Hammer Mfg. Co.,	Milwaukee, Wis.	H. T. Paiste Company,	Philadelphia, Pa.
Economy Fuse and Manufacturing Company,	Chicago	Poss and Seymour Incorporated,	Solvay, N. Y.
Weber Electric Company,	Henry D. Sears,	General Sales Agent,	Boston, Mass.

Read This Letter:



The United Electric Supply Company

Marion, Ohio, Oct. 11, 1921.

This store is the outgrowth of a business started ten years ago on a capital of \$560.00 and as the result of religiously sticking to our slogan "Service to our Customers," we grew until we had to enlarge our quarters to the present size.

Another reason for our success has been that we are firm believers in keeping step with new electrical developments and when the Duplexalite and the company's policy was brought to our attention, we saw its possibilities. We were attracted by the way it came to us, packed complete, ready to install, in a small carton. The fact that you had distributors who carried a large stock also attracted us because it limited us to a very small investment and because of the many places where it successfully serves, the turnover was fast, giving us a splendid profit on the amount invested so that now we consider it the most profitable fixture we handle.

We do not sell a bill of fixtures to a house without including at least one Duplexalite. We have installed over five hundred of them in Marion, Ohio, and only recently we made an installation in **President Harding's Marion Home.**

You no doubt are interested to know how we have sold them. As we had no booth or facilities for properly displaying the good lighting result obtained, we hit upon the plan of putting them in the homes on trial and we were astounded when we checked up and found that the average comebacks were one in ten installed, also that in many cases the customer who bought the one would return and buy more.

We made one trial installation that resulted in the replacement of four other fixtures in the same house and when this party built two houses with ten rooms each, he installed in every room a Duplexalite. It makes the most satisfactory kitchen light we have ever handled.

THE UNITED ELECTRIC SUPPLY CO.

C. W. Graf

GENERAL MANAGER.

DUPLEX LIGHTING WORKS

Of General Electric Company

6 West 48th Street, New York City

Duplex-a-lite

"The light to live with"



The Extra Long Plug

A marked improvement in electrical equipment that will find a wide variety of uses.



A convenience plug

ITS UNUSUAL length provides a solution to the problem of connecting an electrical appliance to a socket equipped with a glass shade.

Maximum efficiency and ready sales will be obtained for appliances equipped with this plug, because its merits will instantly be recognized by anyone who has had occasion to use a short plug.

A new development in the line of Arrow Standard Interchangeable Plugs and Receptacles.

THE ARROW ELECTRIC CO.
HARTFORD, CONN.

ELECTRICAL
ARROW
WIRING DEVICES

ARROW

The complete line of Wiring Devices

"The Cities on the Corners"

All the advantages of a "corner location" sum up in the word "Convenience." Picture in your mind some busy corner store and you'll see a dozen of the forms "Convenience" takes.

Now imagine that "corner" is a city in the heart of some great mining, manufacturing or agricultural section. That city is a business success because it is convenient. To it come railroads, electric railways, perhaps water ways that make it a convenient source of supply for the wants of all the surrounding businesses and people.

It is in cities like this occupying "corner locations" throughout these United States that you find the 48 Western Electric Distributing Houses. From them everything electrical can be obtained. The location and transportation facilities speed deliveries.

Speedy deliveries also make it practical for users of Western Electric Service to maintain only representative stocks and increase their profits by turning over their stock investment more quickly and more frequently.

A
National
Electrical
Service

Western Electric Company

OFFICES IN ALL PRINCIPAL CITIES



THE dependable service users obtain from electrical devices which are powered with R & M motors, is an important sales asset to the dealer, the jobber and the manufacturer who makes the device. It insures pleased customers, the kind who boost the product and make it easy for the dealer to sell their neighbors and friends.

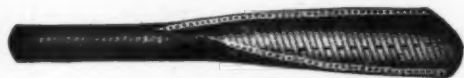
This is the reason manufacturers of quality appliances in ever increasing numbers equip their product with R & M motors. And it is also the reason why so many jobbers and dealers favor devices so equipped.

THE ROBBINS & MYERS COMPANY

SPRINGFIELD, OHIO

BRANTFORD, ONTARIO

Robbins & Myers Motors



DURADUCT

The *original* Single Wall roller-bearing wireway non-metallic conduit.



DURACORD

The *original woven* covered portable cord for hard service.

TUBULAR WOVEN FABRIC CO.

PAWTUCKET, R. I.

NEW YORK
52 Vanderbilt Ave.

CHICAGO
549 W. Washington Blvd.

Make An Extra Profit on Every Electrical Appliance You Sell For Christmas

Every sale of a lamp, a percolator, an iron, a toaster, a vacuum cleaner, a room warmer or other appliance, will mean the sale of one or more HEMCO Twin-Lite Plugs, if you'll just display them.

Remind people, by your displays in window and on show-case, that a HEMCO Twin-Lite Plug will enable them to use any appliance on a socket without having to do without the light on that socket. Everyone who has an electrical appliance *needs* a HEMCO Twin-Lite Plug. And everyone who gives an appliance for Christmas should make the gift complete by adding a Twin-Lite.

Thousands of dealers have proved that displays of appliances with Twin-Lite Plugs not only sell plugs but increase sales of appliances.

One dealer says "A day and a half after we put our display in the window our stock in the store was exhausted and we had to make raids on the window. People came in one after another and asked for 'a double socket like those in the window.'"

A large firm in Chicago, after putting in window and counter displays of appliances with HEMCO Twin-Lite Plugs, is selling over 1800 plugs weekly.

If you are not handling HEMCO Twin-Lite Plugs, write at once for our prices and order a sufficient quantity to enable you to get these extra profits on every sale of appliances for Christmas.

GEORGE RICHARDS & Co.
Dept. 24 557 W. Monroe St., Chicago, Ill.

GEORGE RICHARDS & CO.
344 E. 40th Street
New York City

Pacific Coast Agents
GEO. A. GRAY CO.
589 Mission St., San Francisco

New England Agents
PETTINGELL-ANDREWS CO.
Boston, Mass.

Sole Export Distributors
CORNELIUS-SCOTT-SARGEANT, INC.
29 Broadway, N. Y. C.



"HEMCO" is on Every Twin-Lite

**HEMCO
TWIN-LITE**
HEMCO is on Every Twin-Lite
MADE OF CONDENSITE
WILL LAST A LIFE TIME

WEBER DEPENDABLE WIRING DEVICES

Did Anyone Ever Get It Through Your Head
Why porcelain sockets have to be constructed and
wired differently from brass shell sockets?

THEY DON'T

Weber Porcelain Sockets



Consist of shell, interior and cap (or base) and are wired the same as Weber brass shell sockets; in fact, they are the identical interiors. The interior is first wired in the accepted, sensible way; then the shell is slipped over and secured to the cap.



And the Line is Complete



Four
Socket
Bodies



Five
Switch
And
Rosette
Bodies



Twelve
Caps



Sixteen
Bases

On your next order for porcelain sockets, specify WEBER.

CONSULT OUR 1921 CATALOG

HENRY D. SEARS

General Sales Agent

80 BOYLSTON STREET
BOSTON 11, MASSACHUSETTS

Forty-eight Years

Five Times a Day
or 87,600 Times



Quality that
Lasts



The
Popular
Push-Button
Socket

For
Portables
and Dainty
Boudoir
Lamps



P&S S-34 Push-Button
Body—Operated 87,600
times at 3A.-250V.

This is equal to 48 years at the average
of five operations a day

Order P&S Push-Button Sockets Now
Prompt Delivery

Made by
Pass & Seymour, Inc.
SOLVAY, NEW YORK, U. S. A.



The First Year Book For the Electrical Industry



1,000 pages (9x12 ins.), weight 6 lbs.

HERE is a book you have long needed. Over 1,000 pages crammed with vital facts and figures about every phase of electrical activity and including a mass of useful information about all electrical manufacturers, electrical products, trade names, etc., all alphabetically arranged.

The EMF ELECTRICAL YEAR BOOK—the most remarkable book ever attempted for electrical men and purchasers of electrical supplies—has been highly endorsed by leading authorities in every branch of the industry.

The EMF ELECTRICAL YEAR BOOK combines in one handy volume:

An encyclopedia of current information about each branch of the electrical industry.

A modern, authentic dictionary of all electrical words and terms.

A complete, unbiased directory of electrical and related products and their manufacturers.

There are over 33,000 manufacturers' listings appearing under 2,902 classified electrical products and over 4,900 separate entries of manufacturers as well as 4,351 trade names, 289 encyclopedic entries and over 2,000 definitions of electrical words and terms. There are also hundreds of biographical sketches of prominent electrical men, information about every electrical association, about patents, electrical schools and colleges, codes, exports and practical, useful data on every important electrical application, such as welding, baking, heating, motor drive, etc. Compiled and edited by a corps of prominent electrical authorities.

FREE TRIAL OFFER

We want the EMF ELECTRICAL YEAR BOOK to prove that it is indispensable to you. We will gladly send you a copy for your examination. If you keep it, send us \$10.00, payment in full; otherwise return it to us in 10 days. You are under no obligation to buy. Fill in the coupon now while it is before you.

Electrical Trade Publishing Co.

53 West Jackson Boulevard

Chicago

Also publishers of THE JOBBER'S SALESMAN

ELECTRICAL TRADE PUBLISHING CO.,

53 W. Jackson Blvd., Chicago.

You may send me a copy of the EMF ELECTRICAL YEAR BOOK, charges paid, for my inspection. If satisfactory I will send \$10.00; otherwise I will return the book to you post-paid within 10 days of its receipt.

Name _____

Address _____

City and State _____

Class of Business _____

MR. ELECTRAGIST—

are you PREACHING the gospel of "More Convenience Outlets" to Architects and Owners?

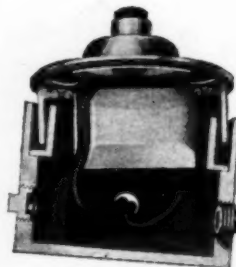
The chandelier must be cast into the discard as a medium for supplying current to electrical devices.

More Floor Outlets, Receptacles and Switch Boxes must be installed if current consuming devices are to be used daily as a necessity, instead of as an occasional luxury.

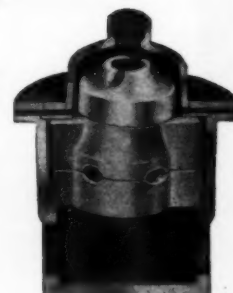
IT PAYS TO USE "THE QUALITY LINE"



Improved
"Steel City"
Switch Box



Fullman
Adjustable
Floor Outlet



Fullman
Non-Adjustable
Floor Outlet

WRITE FOR SAMPLE OF OUR NEW IMPROVED SWITCH BOXES

Free—Souvenir Pencil with "thick lead" upon request.

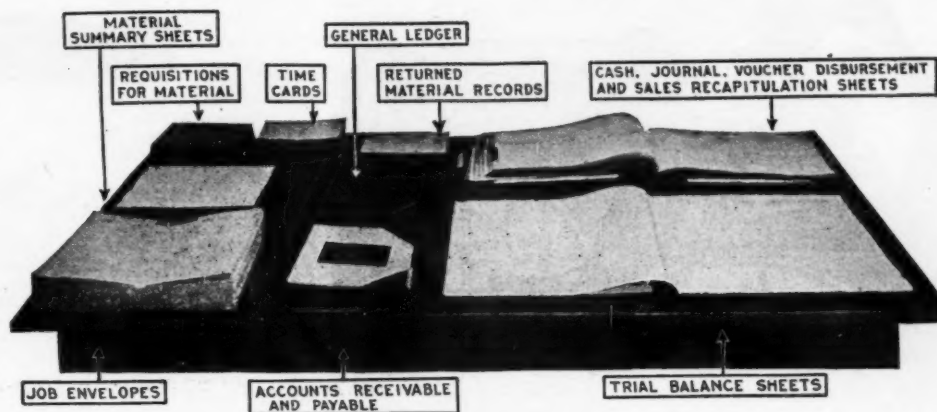
Steel City Electric Co.

1207-1223 Columbus Avenue
PITTSBURGH, PA.

The Electragist Employing a Bookkeeper Should Use the

Standard Accounting System

*Here is the
complete set
just as
it looks
spread out
on an
ordinary
office table*



This is the system adopted by the National Association of Electrical Contractors and Dealers, endorsed by the National Electrical Credit Association, and approved by other branches of the electrical industry.

The Electragial Business Without a Bookkeeper Should Use the

New Business Record

This is an easy and simple way of keeping your accounts without the aid of a bookkeeper. Everything about it is plain and easily understood from start to finish. It consists of only eight forms, and these show the money taken in and paid out; the bills to be collected and to be paid; the general expense, investment and stock. There also is a binder for records, and a simple memo book.

IT TELLS YOU

How much money you have; how much you owe; how much money is due you; how much stock on hand; how much stock you buy; how much you sell; how much it costs you to do business; how much profit you make; or how much you lose; and all other necessary facts regarding your business.

DEPEND ON IT

It is handy, and always ready for you to use; it is reliable and accurate; it saves you time, money, and worry; it settles disputes and saves money for you; it helps you straighten out matters with your banker, your jobber, and the tax collector; it is a necessary factor in your business.

**Look Into this Matter Today and Figure on Starting Your Business Record or
Standard Accounting System**

FULL INFORMATION SENT UPON REQUEST BY THE

National Association of Electrical Contractors and Dealers

15 West 37th Street, New York City



After Christmas

One way of stabilizing "after Christmas business" is to get your share of these late buyers by calling their attention to the complete line of Westinghouse irons. These irons will present a powerful appeal to all women who have Christmas gift money.

There are styles for every need—a light travelers' iron—medium weight household irons—and heavy tailoring irons.

Obtain copies from our nearest agent-jobber of folders 4425, 4426-A and 4449, on irons and appliances, and distribute them among your prospective customers.

Westinghouse Electric & Manufacturing Company
Mansfield Works, Mansfield, Ohio
Sales Offices in all Principal American Cities

Westinghouse

One Motor With a hundred uses for the HOME-SHOP and STORE



A New "After Christmas" Idea!

What can you sell after Christmas: after peak holiday sales are past?

Westinghouse offers you a new suggestion—an after-Christmas sales plan that will keep your sales going strong.

It is the idea of selling the **small motor** to the storekeeper for his coffee grinder, and to the man at home for his odd jobs—for a power work bench.

These sales are not hard, your customers are generally enthusiastic over the many handy jobs this inexpensive little motor will perform, and enthusiasm fosters permanent customers.

Are we not right?

Westinghouse Electric & Manufacturing Company
East Pittsburgh, Pa.

OFFICES IN ALL PRINCIPAL AMERICAN CITIES

Westinghouse

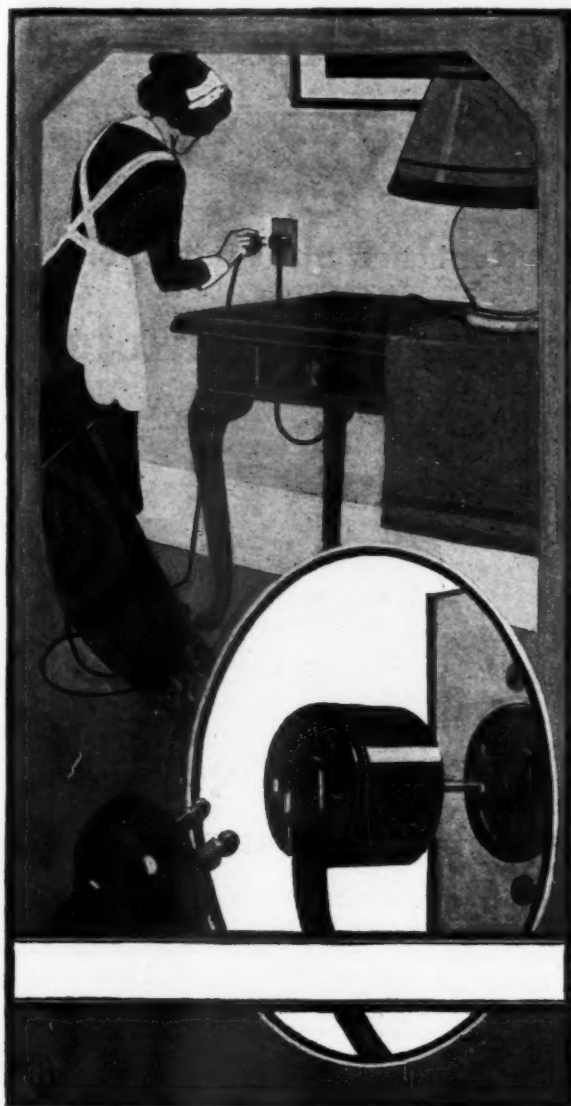


**A Copy of this Catalogue, 7-A,
should be on every dealer's desk.**

It illustrates, and describes in detail, with
prices, the full line of Westinghouse-Cutter
Industrial Lighting Equipment.

WESTINGHOUSE ELECTRIC & MANUFACTURING COMPANY
George Cutter Works, South Bend, Indiana

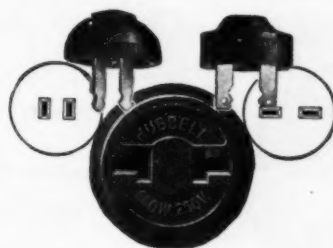
Westinghouse



Something new!

Hubbell Te-Cap

Here is a real sales maker. It is called the Hubbell Te-Cap: "Te" because it carries a pair of T-Shaped slots, taking any standard cap blades, whether these are tandem or parallel; and "Cap" because it is a practical Hubbell Composition Cap with Tandem Blades, fitting any Convenience Outlet.



Here are the famous Hubbell Te-Slots, standard for all Convenience Outlets. Note that the incorporation of the parallel and tandem slots gives in one T-shaped opening the Convenience Outlet accommodating all standard bladed caps.

With the Hubbell Te-Cap attached to lamp or other cord, there are still two T-shaped slots to receive the blades of any standard cap. It is only necessary to exercise the usual care not to overload the line.

Literary Digest and Good Housekeeping advertisements in January will feature HUBBELL Te-Tap No. 1 (3190)

You know this device—Hubbell 3190, Brass Shell Pull Socket Current Tap, with Te-Slots. As Te-Tap No. 1, in its neat four-color carton, it is featured in the Hubbell Te-Tap-Ten. January advertisements in GOOD HOUSEKEEPING and LITERARY DIGEST will feature this Te-Tap, showing it in just the manner illustrated here.

Sell it for the Living Room, Dining Room, Library or Bed Room. Show your customers the Te-Slots on the side, taking any standard Cap. Demonstrate the Pull Chain, affording independent control of the lamp. Show them that the lamp will hang vertically—that they can use their present shade holder and shade. These are distinctive features—sales-making arguments.



HARVEY HUBBELL INC.
ELECTRICAL SPECIALTIES
 BRIDGEPORT CONN., U.S.A.



NEW YORK

SAN FRANCISCO

2184-U
 CHICAGO

"JIFFY" KNOBS

**Nail and Screw Type
Assembled Complete
Ready to Use**

Most SUBSTANTIAL and best WIRE GRIPPING knob on the market.



Note Bead for Wire-Grip

Insist on
"Jiffy" Knobs

**Saves Time
and Money**

Self-centering and no sharp corners to chip off or break.

No odd caps or bases.

All hand sorted and packed in boxes of 500 complete knobs. Furnished in new or old code size.

Ask your jobber for them, or write direct to us if he hasn't them.

We manufacture a complete line of Standard Porcelain Material, including Knobs, Tubes, Cleats, etc.; also Line Strain and Screw Thread Insulators.

Send for our catalog—and specify "Trenton" Porcelain on the orders to your jobbers.

Trenton Porcelain Co.
TRENTON, N. J.

Why Motor Users Demand

Century

Repulsion Start Induction

Single Phase Motors



Sizes
1-10 to 40 H.P.

Every one will agree that motor users are always in the field for motors that will stand up under hard usage, motors that will operate under unusual conditions, and still give satisfactory service. Motors with the above qualifications are obviously sellers.

Century Repulsion Start Induction Single Phase Motors can, and do, give satisfactory service because they possess the characteristics listed below.

Starting Torque, in excess of 300% Full Load Torque, makes them desirable for apparatus requiring a high starting Torque.

Starting current, less than 275% full load value, reduces the strain on transformers and line.

Automatic operation allows them to be remotely controlled by a single knife blade switch.

Silent operation makes them desirable in many instances, such as the operation of church organs, etc.

Finally, they have demonstrated their ability to KEEP-A-RUNNING. Send for illustrated booklet.

CENTURY ELECTRIC COMPANY

St. Louis, Mo., U. S. A.

Sales Offices in Principal Cities

SPRAGUE

DURABLE WIRING MATERIALS



BX
DOUBLE STRIP

BX
SINGLE STRIP

Everything
for the
Complete
Wiring
System-

SPRAGUE ELECTRIC WORKS
Of General Electric Company
PIONEERS OF THE INDUSTRY

Buy It From the Navy



Electrical Apparatus and Supplies

The Navy now offers an *unusual opportunity* to the Electrical Dealers and Jobbers for purchasing supplies promptly at very *attractive prices*.

Among the numerous items offered are:

BELLS, SOCKETS
SWITCHES, PANELBOARDS
CONDUIT FITTINGS
INSULATING MATERIALS
FUSES, FLOOD LIGHTS
HEATERS, FOOT WARMERS

Various sizes of BX, BXL leaded and special cable, also oil proof telephone cord

These materials are particularly desirable for those who cater to the Marine and Industrial Fields. Special price inducement will be offered on quantity purchases for a limited time.

Catalog No. 501, describing the electrical supplies and apparatus has been prepared for the jobber and dealer.

Write or wire for your copy before the convention.

Central. Sales Office

Navy Dept.

Washington, D. C.

ADAPTiBOXES



ADAPTiBOXES

Install Conduit Systems That Take Care of Today's Needs and Provide for Tomorrow's

COOPERATE with your customers by installing conduit fittings that permit future changes or additions in the conduit system at no greater cost per outlet than that of the original installation.

It means future business for the electrical contractor because manufacturers do not hesitate to order needed changes or additions in a conduit system that was installed to meet all future demands.

The only conduit fittings that do this are ADAPTiBOXES.

THE ADAPTi COMPANY, CLEVELAND

ADAPTiBOXES

ANYLIGHT DIMMING SOCKET



HAS MANY ADVANTAGES

Gives ten degrees of light that you can see—
Bureau of Standards says twenty.

Takes Uno Shade Holder—You carry but one type.

Fully guaranteed to work perfectly under proper conditions.

Mounted ten, on attractive sales-making display card.

PRICED RIGHT—BIG PROFIT—QUICK SALES

Your Jobber Can Supply You or I Will

A. HALL BERRY

71-73 MURRAY ST.
NEW YORK, N. Y.



Lighting Fixtures and Accessories

How to Sell Them—How to Display Them—How Other Dealers Do It—Valuable Merchandising Tips and Installations are Featured Monthly in

LIGHTING FIXTURES AND LIGHTING

The Trade Journal of the Lighting Industry

M. V. Rutherford, President of Progressive Electric Co., Minneapolis, Minn., says of Lighting Fixtures and Lighting:

"Your magazine is the snappiest, most condensed magazine of its kind we have yet had the pleasure of reading. In this business world we have not time to read numerous details. What we want is facts. You are to be congratulated."

If it's good enough for this dealer—if it's just what he wants as an aid in selling more lighting, then LIGHTING FIXTURES AND LIGHTING should be worth \$2.00 a year to you.

Subscribe Now—Use the Coupon

Lighting Fixtures & Lighting

The Trade Journal of the Lighting Industry

175 FIFTH AVENUE

FLATIRON BUILDING

NEW YORK, N. Y.

TEAR OFF AND SEND NOW!

Lighting Fixtures & Lighting,

1011-1012 Flatiron Bldg., New York:

You may enter our subscription to LIGHTING FIXTURES & LIGHTING for the next twelve months beginning with _____ issue for which we enclose \$2.00.

Name _____

Address _____

City _____

State _____

Dec. 1921.

You Violate the Law

When you fail to ground properly; when you make bad splices; when you overload feeders or mains; when you use wrong fuses; or in a thousand other cases when you do not properly interpret the Code.

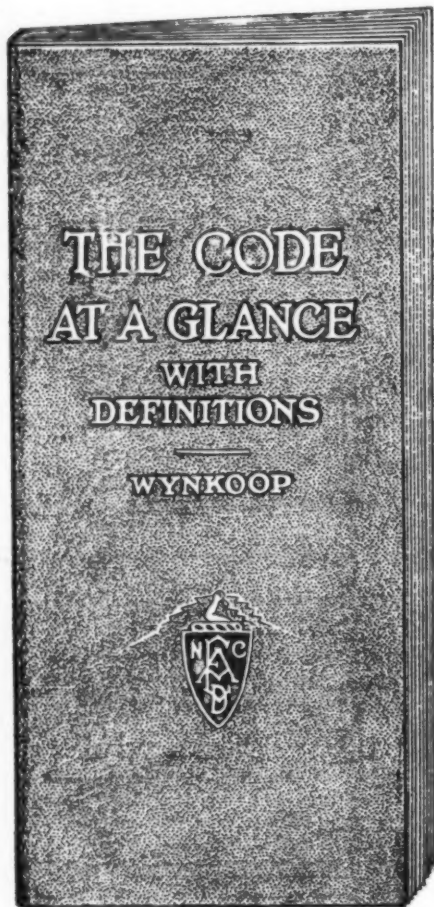


Illustration Greatly Reduced

All subjects of the National Electrical Code are alphabetically arranged in

The Code at a Glance

This useful little book—pocket size—also contains a complete glossary of

Code Definitions

If, for instance, you want to know the difference between "Apparatus" and "Appliance," or "Device" and "Fitting," or whether a place is "Accessible," "Easy of Access" or "Readily Accessible"—you can quickly and easily find the answer in the *Code at a Glance Definitions*.

The price of The Code at a Glance
is \$1—sent to you postpaid

If you have occasion to refer to the National Electrical Code you cannot afford to be without a copy of this book.

Send check, money order or currency to
National Association of Electrical Contractors & Dealers
15 West 37th Street, New York City

Read what Chief Electrical Inspector
Victor H. Tousley, City of Chicago,
Writes to Mr. Wynkoop:

"It is very essential and very desirable that a publication designed for the use of wiremen, contractors and those who are not thoroughly familiar with the rules, but who in their business have to constantly refer to them, be of such design as to make this information complete and easily found. I believe you have accomplished all of this in your *Code at a Glance*."

Here's what Chief Electrical Inspector
J. C. Forsyth, New York Board of
Fire Underwriters, writes:

"In some cases where I have had occasion to look up particular rules I find that it is much easier and quicker to obtain the desired information from your tabulation than from the Code itself."

THE RESOLUTION

Whereas, There is need of words to designate our business and activities; and

Whereas, It is proper that we should deliberately add to our vocabulary such properly derived words as are required; now therefore, be it

Resolved, That the following words be adopted as recognized by us with the meanings attached:

NATIONAL ELECTRAGIST

FORMERLY ELECTRICAL CONTRACTOR-DEALER

(Trade Mark)

Official Journal of the

National Association of Electrical Contractors and Dealers

Publication Office: 11 Liberty St., Utica, N. Y.

Editorial and Business Offices: 15 West 37th St., New York City

THE NEW WORDS

Electragy—Name of the trade or business of Electrical Contractor-Dealer.

Electragist—A person conducting such a business.

Electragician—A person working at the business.

Electragize—A verb—to work at the business—or to provide electrical equipment.

Electragic—An adjective—relating to the business.

Electragian.

Electragial.

Volume 21

DECEMBER, 1921

Number 2

Time for an Accounting

As the year draws to an end, business seems to be taking an inventory of itself. It has been a long and tiresome year for most lines of commercial endeavor—a year of expectancy with some, and of blasted hopes with others.

However, business now seems to have squared itself for an upgrade pull. It has shaken off some of its overload of overhead; dropped many of its unprofitable elements; shifted some of its nonproductive burdens; and now it is prepared to start without so much of a handicap as it previously carried.

During the past year or more of depression, every thinking business man has been seriously watching his outgo, as well as his income. He has been making a careful estimate of his assets and liabilities. He has decided that he never again will be fooled by a business boom—or deluded by a period of unjustifiable inflation.

It was high time for an accounting. Business had been running wild. For the past five or six years few business men knew just where they stood. No business can continue long without proper methods of accounting. There must be a systematic checking up of every item. A trial balance must be taken, and future transactions must be governed by the results of past performances.

Before the first of next year, let every electragist know how his business stands. Let him make an accurate accounting. Let him be prepared to meet the new year with a clean slate. In such circumstances he will enjoy the holiday season.

And a merry Christmas to all!

The 660 Watt Rule

Last month, in the Contracting Department of this magazine, note was made of an experimental installation about to be undertaken in New York City, where the 660 watt rule is to be ignored.

The National Association of Electrical Contractors and Dealers went on record at the Buffalo convention last July against this rule, and appointed a committee to confer with the fixture manufacturers and the inspection departments, to the end that this obsolete requirement be amended or abandoned.

Hubert S. Wynkoop, author of *The Code at a Glance*, has been advocating for many months some amendment which, while retaining the engineering principle that underlies the rule, will so alter it that inspector and contractor can meet on a common footing of facts, and not guesswork. R. S. Hale, chairman of the wiring committee of the National Electric Light Association, is also urging a change.

Many members of the electrical committee of the National Electrical Code admit the confusion, uncertainty, and dissatisfaction which are due to the necessity of interpreting the rule under theoretical premises instead of actual facts, but they all express a reluctance to giving up the present requirement until a satisfactory substitute has been found.

Therein lies the difficulty. What is a satisfactory substitute? Can dependence be placed on the fuse alone—or on the fuse if the number of outlets is limited? Or will there be a greater temptation under the substitute rule to jump the 10 ampere fuses and use larger ones? Will the so called overloading of circuits be increased?

These are a few of the questions which confront J. C. Hatzel of New York City, who has taken the matter in hand on behalf of the National Association.

More Than an Electrician

To the great unthinking public there has been only one word to designate the man who in any manner has associated himself with electricity. He is an electrician.

The electrical inventor, when known to the public, is an electrician; so is the man that climbs the pine pole out in front of the house. The fellow that tinkers with the door bell when it requires repairing is an electrician; and so is the studious looking boarder across the table, because he works in the research laboratory of a big electrical company. The public calls Thomas A. Edison an electrician in the same breath with the wireman's helper and the curbstone contractor. All are electricians that to the public seem to be skilled in the science of electricity.

A few years ago those engaged in the retail branch of the electrical industry decided to call themselves electrical contractor-dealers. Up to the present time nobody ever has heard the public refer to them by that title. To the public they are still electricians, whether they operate from a shop, a palatial store, or a tool bag. Once an

electrician, always an electrician, is the belief of the public.

There is just one way to break down this erroneous belief—be an electrageist! An electrageist is an electrical contractor-dealer whose quality of service rendered to the public is of the highest order of efficiency.

Perhaps this is setting a mark that may be difficult to reach. Certainly it will be if the electrical contractor-dealer persists in permitting the word electrician to remain on his windows. So long as he continues this practice he will be an electrician and nothing else—and he always will be an electrician and nothing else unless he aids in selling to the public the new and expressive term electrageist.

With due respect to those who think that house wiring and appliances cannot be sold by the same man, the fact remains that it is *safer* for the public to buy electrical goods from stores conducted by experienced electrical men. The public should be taught that this is a *fact*—it should be taught to discriminate between the words *electrician* and *electrageist*—it should be shown the true meaning of the latter, even though it continues to apply the former to such a wide spread field.

The electrical contractor-dealer should be a business man—an electrageist. He should prove to the public his fitness to engage in the business of electragey. The public quickly learns things that are easy to learn, although it often takes a long time for it to unlearn. Make it easy to learn that every member of the National Association of Electrical Contractors and Dealers is an electrageist.

Following Saturation

In an industry so young as is the electrical industry, there is practically no end to hope and no surcease to development.

At present the main interest of the electrageist is in the state of demand. There is nothing to indicate that so much as an approach is being made to where commercial saturation begins. But for argument let us assume that even such a remote condition has been reached and that the pessimists who are always with us have set up a new howl: Where is any additional electrical business to come from now?

These crepe hangers who have been slipping backward have not thought of one important thing, but the successful optimists have, and the latter are banking on their confidence with continued cheerfulness: *replacement*.

Replacement inevitably must come, and the thoughtful electrageist is positive, and with reason, that once the user of labor saving appliances and appurtenances—household helps and electric lighting equipment—finds his comforting property wearing a bit, he is not going to cast any of it aside. Instead of that, he is either going to have it renewed, if it is renewable, or else he will at once replace the article with another one—which perhaps will be an improved type. Nobody who has ever become accustomed to things electrical ever gives up the use of them.

Any one who has ever gone through the candle, kerosene, and gas light period to electricity, is as one having gone from alphabet blocks and the old third reader to Shakespeare and George Bernard Shaw. Was anybody

ever known to give up Mark Twain and go back to first primer reading? Not a bit of it. The more one reads, the greater grows his capacity for reading; and so it is with the use of electricity—it cannot be done without nor done away with; and the conveniences which require its power in any capacity, once utilized, are bound to be replaced as soon as time wears them out.

Let the electrageist look forward and onward beyond present sales to resales—a continuous replacement.

Convenience Outlets

What a great opportunity there is for the progressive electrageist to tie in on the campaign now being waged for adequate outlets! What a worthy cause it is—and what a chance for future business!

Two years ago last October the More Service Outlets division of the National Electric Light Association held a meeting in Chicago where it was decided that the public should be educated in the use of what were termed service outlets. At that time the title of this useful committee was changed to the Adequate Outlets Committee.

Very able work has been continued along these lines since that time, but it was not until the California Co-operative Campaign committee struck upon the unique and simple plan of carrying on a *convenience* outlet drive that there was much of a chance that the public would get in on it.

Why? Because the public does not know an *adequate* outlet nor a *service* outlet from a double barrelled gadget. But the public does know *convenience*, and the true meaning of that word. The public wants convenience—regardless of expense. Here is a chance for the electrageist to supply it. The drive should become nation wide.

First, show the public what an outlet really is; explain the *convenience* afforded by *convenience outlets*—the effects produced and the comforts gained; then the customer will be sold *results*, rather than mere outlets.

It is far easier to create a demand in this way—and a demand for more outlets means much for future business. Electrageists will all join in this campaign for convenience outlets, and make of it a real *national* drive.

Sell Quality, Not Price

For the betterment of the contractor-dealer business, each and every man connected with it should think nothing but quality, talk nothing but quality, and sell nothing but quality.

A higher grade of material, even at a higher price, is the best known form of competition that any fair dealer can give his neighbor. A user of high grade material is the best kind of an advertisement for any business.

Let a man who is in need of one see a superior grade of overcoat on another man—does he not at once want to know where the other fellow got it? If he sees an ordinary overcoat made of an inferior grade of cloth, he does not even give it a second look.

And so it is with the electrical business. The honest builder of a house is anxious to build another, and still another, but he never can build a sound reputation for him-

self on a job where cheap materials and defective installation and workmanship have been used. If the electragist will only persist in carrying in stock and selling the customer the better quality, he will build his own business on what is accomplished by the house builder. Sound reputation means a continuity of financial progress.

Let the electragist always sell quality. He can make the selling of it easier by talks showing why quality and not price should be the first consideration. An intelligent understanding of why prices are higher always helps the buyer. Therefore, never fail to let your customer see why you have confidence in things of a certain manufacturer. Show him where the real merit lies. Get into the habit of salesmanship on the manufacturing basis. Get the reasons why and quality selling into the foreground of your mind, and do not conceal honest business facts from the prospective purchaser.

Forget an unhappy habit of thinking it is necessary to run down the cheaper grade of goods. Forget that they exist. Bring forward how imperative it is for good business to force quality to the fore and keep it there.

Think quality—talk quality—sell quality. Make more rapid business strides on a quality basis. Do not forget that price for inferiority is the biggest millstone which makes business suicide easy.

More Information Needed

On another page of this issue is an article having as its subject a matter which should be of great import to the electragist. It relates the actual experience of a prospective tenant who was unable to procure immediate information regarding the supply of current entering a new apartment building. Nobody seemed to know anything about it.

This is by no means the first time that such a condition has been brought to notice, and with the increase in production and variety of new types of electrical household appliances, such as are coming into the market nowadays, the time seems ripe to impress—to importune—to impel—

every electragist who deals in them, every manufacturer who makes them, and every seller of electrical publicity, to get together on relative descriptions. It would take very little additional space or expense to state in all printed matter the maximum wattage and the proper size of wire required for successfully operating all kinds of household appliances.

This descriptive material goes to the actual user—not to the experienced electrician or engineer. It should be written in simple, understandable language. It also has been said that most of the direction slips which usually are placed in the container or on the device itself, do not give enough detailed information to the purchasers. Every card of directions should be explicit and complete, and in a measure it also should be in the nature of a follow up which would suggest the purchase and the advantages of other household appliances and conveniences.

More thought should be given to the customer's end of the matter. Some sort of an informative program should be worked out whereby the public may be able to know, for instance, that when a twenty-five hundred watt electric range is purchased—or rather before it is purchased—special wiring will be required to carry the abnormal load.

Give the consumer specific and complete information on each appliance and device. Tell him whether or not it may be attached to any key socket, or if it should be used only with a keyless socket or a receptacle. Describe the difference between a socket and a receptacle. Make it clear whether a motor will run only on direct current, or only on alternating current, or on either. Some few years back it did not take the customer long to learn the candle power of lamps, volts, or watts; and he is usually intelligent enough to employ modern electrical appliances properly, if only he is given the chance to learn about them through the manufacturers' literature, with the added assistance of the electragist and his sales people.

Continue and widen the electrical educational campaign. Adopt some plan whereby every wired building will become an educational medium for the public, which necessarily would help every electragist, as well as every manufacturer and power company.

The Neutral Fuse

BY HUBERT S. WYNKOOP, M. E.

Question of Certain Code Requirements Again Discussed by Authority Who is in Charge of Electrical Inspection, City of New York

Again the demand is becoming insistent for the dropping of the Code requirement that there shall be a fuse in the grounded conductor of a branch circuit. The pros and the antis have hitherto deadlocked the discussion; and the requirement remains in force.

An analysis of the fifth paragraph of No. 23 d discloses some interesting and unexpected features. The rule is in effect two rules in one, and this statement is perhaps best supported, or illustrated, by paraphrasing, as follows:

1. Two wire or three wire circuits. All branches or taps from any 3-wire system which are directly connected to lamp sockets

must be run as 2-wire circuits (but this requirement does not apply to taps which are directly connected to translating devices other than sockets).

2. Fuses in branch circuits. All wires of all branch circuits which are connected to lamp sockets or other translating devices must be protected by proper fuses except that the grounded conductor of 3-wire distributing circuits must not be fused (and this requirement applies as far as it may, irrespective of whether the system is 2-wire or 3-wire).

The rule now stands out prominently, and is hardly susceptible of misinterpretation. We see what it says, and whether we agree with it or not—we can develop our own arguments for or against its requirements.

It seems probable that, in differentiating between circuits for lighting and circuits for heat and power, the thought was to recognize the greater danger of breakdown that lay in the lighting circuit—grounds or shortcircuits in fixture wires, flexible cords and flimsy appliances—as compared with heating and power circuits, which usually supply substantial devices by means of substantial wiring or cables.

Then, again, the energy required by heaters or motors runs so far beyond that required for lighting as to render some concession advisable in these cases, in order to obviate what many

might consider an excessive use of copper if 2-wire circuits were demanded for "other translating devices."

Now, having conceded the 3-wire branch circuit for heating and power, it became necessary to guard against the damage to appliances which results in a 3-wire circuit if the neutral fuse lets go while the circuit is badly out of balance. So the fuse in the neutral is prohibited, as stated in the latter part of the rule.

Whether justly or not, this somewhat anomalous situation gives encouragement to those who would have the fuse omitted from the grounded conductor of the 2-wire circuit as well. Is there any consistency in sometimes requiring the fuse, and sometimes prohibiting it? Undoubtedly; but the case is not nearly so simple as this one question would imply, and it would be well to abandon for the moment this line of inquiry and proceed with the analysis of the rule.

Fuses are required in both conductors of a 2-wire branch circuit—such a circuit as must be employed for lighting. The old argument (to which no one attaches much importance today) was that if the householder was facile with pennies or tinfoil, the other fuse would furnish protection. We know now that the householder does not discriminate between polarities, but doctors two or more fuses just as readily as he does one.

This admission is seized upon by the one-fuse party as an evidence that we are being driven out of our last stronghold. What excuse remains now, they say, for requiring a fuse in the grounded conductor of a branch circuit, when you prohibit it in the grounded conductor of a main, or of a feeder? Why yield to the safety-to-life idea in the case of the larger fuses, which are the least likely to blow, and retain the branch circuit fuse which goes out most readily, and thus vitiates the effort at grounded conductor protection, and at the most vital point?

Well, we had the fuse before safety-to-life came along. The burden of proof rests upon the latter. We are entitled to demand that we be shown that the omission of the grounded conductor fuse in the 2-wire branch circuit *will not get us into operating difficulties*.

With a 3-wire system, with 3-wire branch circuits, all concerned must attend to the polarities or much damage will result. This in itself affords a reasonable assurance that the neutral will

always remain the neutral, and that, if by any chance, it does not so remain, the fact will become evident at once. There is therefore no point in insisting on a fuse in the neutral; indeed, there is every argument against it.

When we come to consider the 2-wire circuit, however, whether fed from a 3-wire system or from a 2-wire system, we have not the same assurance as before. Granting the improbability of a reversal of polarity of the 3-wire service, there is always a doubt as to the 2-wire service, and as to the 2-wire circuit. Operating conditions do not demand the same care, because with only two wires the circuit continues to function properly, regardless of which wire is grounded and which is ungrounded, *if both wires are fused*. If the fuse in one conductor is omitted and that conductor is grounded, it may readily happen that a reversal of polarity may occur, which will throw the single fuse into the grounded side, where it is worse than useless, and remove it from the ungrounded side, where it actually provides protection.

This, then, is the reason for the retention of double pole fusing of 2-wire branch circuits: lack of assurance that the original polarities have been properly adjusted and that they will remain unchanged.

Hitherto, the public service corporations have failed to give the necessary assurance as to 2-wire services, and nobody seems willing to guarantee that the proper polarities will be observed by the wireman in making the wiring installation. Before we can make much progress in this matter we must have "identification" of conductors, for the benefit of service man and wireman alike; and the Code has gone only a very little way along this path.

The identification of conductors and the polarized wiring of appliances is a very large subject, touching upon very many rules of the Code and expanding in scope and difficulty as one delves into it. Even if the lighting companies were to modify their past attitude, and give reasonable guarantees as to their service connections, we would still be compelled to consider how the wireman might be held to responsibility for the lay-out between the service and the branch circuit. Complete polarization is, of course, the answer. But we are still very far from complete polarization.

Clearly, the times are not opportune for the approval of single pole fusing of 2-wire branch circuits.

Another Campaign of Lighting Demonstrations

So successful were the lighting conferences and demonstrations which were held last winter and spring by the Edison Lamp Works in more than seventy of the leading distributing centers of the country, that they are again being conducted. A total of nearly eleven thousand attended these demonstrations, and the result was not only the selling of the better illumination idea but direct orders and prospects for the jobbers.

The methods followed are essentially the same as before. Demonstrations of various types of lighting units, ranging all the way from unshaded, glaring lamps to the latest, best and most efficient units, are given in a portable canvas booth. Thus those who attend have an opportunity to judge for themselves the relative efficiency and desirability of the different types, being aided by foot candle meters which are distributed among them. A miniature show window forms part of the exhibit, and during the demonstration it is lighted with colored lights showing the wonderful effects that may be obtained in show window illumination not only by the use of the primary colors, but by combinations of them.

The demonstrations are given with the coöperation of the jobbers in the territory where they are held.

How to Cure Tuberculosis

Fresh air and sunlight, clean nourishing food and sufficient rest are the great preventives and remedies. "Out of Darkness into Light" pictures strikingly the dominating feature of the movement to eradicate tuberculosis. The first step is to bring people—children, workers, everybody—out of dark, damp, poorly ventilated places, into homes, schools, workshops where sunshine and fresh air are plentiful.

WHEN you want information or data write the National Office. It is maintained for your use.

Six Essentials to Business Success: VI

By J. E. BULLARD

What Service is and its Value to the Business Man
is Set Forth in this Final Installment of this Series

Service is a word so carelessly used that its real meaning is more than likely to be overlooked. When used in connection with business it may properly be considered to mean anything that benefits the community or the customers. It may be well to state right here that anything that people get for nothing has been pretty thoroughly demonstrated to be something that does them harm rather than good. Service, therefore, doesn't mean giving something for nothing. It rather means the reverse.

Electric light service is a real service because it is of untold benefit to the community. Everyone benefits from it whether using it directly or not. The value of all property is increased, the sales of the stores are increased. If a dealer in any line had to go back to candle light he would find that his sales were falling off. Unless the people who benefit from this service, however, pay for it, it ceases to become a service and becomes a philanthropy, and there is always a vast difference between a charity organization and a business organization both in regard to the way the money is raised and the way it is managed.

Both are responsible to the people who supply the money, but in the case of a service, it is the people who receive the service who supply the money, while in the case of the charity it is the people who give it. This is the main difference between a service and a charity. One is democratic and the other paternal.

Better Value and Cheaper do not Mean the Same

The benefits that a community derives from good service are easier ways of spending money in such a manner that the greatest possible value may be derived from the spending of this money. A central station by spending less money on lines and equipment might be able to sell current at a lower rate. But this reduction in rate would mean that there would be more frequent interruptions in the supply of current and possibly a greater variation in the voltage supplied. The result would be poorer service. Though people got their current cheaper, they would really be getting less value for their money.

Good service, better value for the money spent, therefore, does not mean lower prices. It may mean just the reverse.

A dealer or contractor by locating in some out of the way place might be able to do business at a lower cost. If he had no telephone or salesmen he might still more reduce his costs. In doing all this, however, he would be making it harder for people to spend their money with him. As a matter of fact, he would be making it so hard that they probably would not spend much if any money with him. If they did, however, they would not be getting better value for their money. The cost to them of spending it would be too much greater. They would not be receiving real service.

Teaching Use in Real Service

If a person spends his money for something that he does not know how to use and is not thoroughly instructed in its use, if he is not shown how to get the very best results from that which he has purchased, he is not being served well. He is not spending his money in such a way as to get the very best value for it. It would be better for him in the end to pay a few more dollars and receive demonstrations and instructions that would enable him to get the best results from this article.

Thorough demonstrations and instructions make it easy for a person to use that which he has purchased. Therefore these are a part of real service and it is profitable for the customer to pay a price that makes them possible. In fact good service, real service, is always appreciated and all sensible people are perfectly willing to pay for it. It matters not what it is called. On the other hand, something that is called service but which in reality does not benefit either the customer or the dealer will never prove profitable to anyone. It is merely a waste of time, energy and money. The true measure of service is the extent to which it benefits all concerned. If it is of no benefit, it is not service. If it is of great benefit, it is real service.

Just because it is a real benefit good service always pays. The dealer who by means of special plans of payment,

by special sales methods, or in any other way makes it easy for people to buy those things which will be of real benefit to them is rendering them a real service. He is also increasing his sales and his annual profits. The easier he makes it for them to spend their money with him the more they will spend. People are not inclined to overcome resistance when spending their money. They spend it where and for what it is easiest to spend it. If those in the city who are selling electrical appliances make it even just a little harder for people to spend their money for these appliances than for phonographs, pianos, automobiles, and fine clothes, they are going to spend their money for these other things other than electrical appliances. Spending money always follows the line of least resistance. Hence the value of rendering real service in this direction.

It is a very grave mistake to think that the competition for the dollars of the people is confined to the dealers in the particular line of business being considered. As a matter of fact there is less competition between electrical dealers for these dollars than between the dealers as a group and all the other retailers in town. It may even happen that if there is only one dealer in town he will not be able to sell more than a third as many goods as would be sold in that town if there were two electrical dealers selling them. Many a concern in a small community has found that it has done more business after another one in the same line of business has come to town than it ever did before. Between the two of them they are able to make it easier for the people to spend their money for the line of goods considered. Better service is being rendered to the community. As a result both dealers are more prosperous than either would be if he had the whole field to himself.

Developing Employees

Anything that is done to make employees better employees, any training given them is a real form of service. The benefit from this work is three fold. It makes the employee worth more to himself. He is enabled to get more out of life. The money that he earns

begins to mean more to him. Therefore, he benefits immensely. The community benefits because this employe becomes a better citizen. The employer benefits because he has a better employe, one who is of much greater value to him. Also one who is likely to remain with him much longer than would otherwise be the case.

Such a course on the part of the employer also makes it easier for him to secure just the sort of employe he desires. He can pick and choose. He never has to accept all comers. The people in the community appreciate the service that he is rendering and patronize him to a greater extent than would otherwise be the case. There are many business men who owe no small amount of their success to the service they have rendered by training and developing their employes. It is a service which if properly rendered never fails to benefit all concerned.

The man who aids in establishing a local chamber of commerce, who takes an active part in such an organization and who does all that he can in this and other ways to make business and living conditions in the community better is rendering a real service to his community. Trying to better local conditions sometimes results in surprising profits.

In a certain city there arrived a couple of men who had been operating the class of stores ordinarily known as "fly by nights." They had never remained very long in any one city and there were certain aspects of their business which were not considered entirely ethical. When they located in this city, the other business men in town got together and took up the matter with the newspapers. All the facts were revealed and the newspapers decided to accept none of the advertising of the concern run by these two men.

With the newspapers closed to them, they had to find some other way to reach the public. The only class of people to whom they could appeal with success was the laboring class. They started a little paper of their own with a special appeal to these people and delivered it free. To make people read it they started a fight to better some of the conditions in the city that had a direct interest to the laboring class. The work they did along this line created so much good will for them that they found it profitable to clean up their methods and to continue the work.

Accidentally they had started a real

service, a service which was appreciated. From that time on they prospered as they had never prospered before and to-day have one of the most successful and largest retail businesses in the city. Their success dates from the day when they started that form of service. They have kept it up from that time on.

Value Measured by Returns

The value of service may be measured with a very fair degree of accuracy by the returns it brings. If it does not mean that people are perfectly willing to pay a higher price for goods purchased in that store or that the volume of business increases, then it is not good service. If it does do one or both of these things then it is good service.

There is a certain class of people to whom good service means exclusiveness. It means placing the goods in very expensive settings and charging so much for them that only the favored few can afford to buy them. This class of people is not encountered as yet in the electrical field as in some others but the time will probably come when it will pay dealers in certain cities to cater to these people, to render them the service and charge them the prices that please them. If they are pleased with the result then as far as they are concerned they are receiving really good service and the dealer will prosper.

Giving away anything for which one does not in one form or another receive full and complete return is not service. It is either foolishness or charity. People are always more than willing to pay for real service. The better the service the more willing they are to pay for it. They do this paying in two ways. Either they pay more for what they buy or they buy in greater volume. In either case the result shows up in the sales and the annual profits.

The dealer in any line in order to exist must perform a really worth while service for the community in which he is located. The dealer is to all intents and purposes a servant of that community just as the public officials are. The primary service he is expected to perform is to gather together in his store from various sources those things that people desire to spend money for in order that they may find it just so much easier to spend this money. In some cases the people do not know just what is needed to fulfill their desires. For

example there may be a keen desire to make house work easier. The housewife does not know just how to go about it to satisfy this desire so the electrical dealer must instruct her. In doing so he is performing a real service.

He is acting in an educational capacity but the public is willing and ready to pay him far more liberally than it does the public school teacher. This makes two great functions of the dealer. First he acts as an agent for the public in his community and second he acts as a teacher. The prosperity of this business is a pretty sure indication of just how well he is performing these functions, of just how much service he is rendering.

People demand service; they must have it. The present state of civilization could not exist if the service that the dealer renders was not performed. Demanding it, people are willing to pay for it. They do not want and do not expect charity. They resent something for nothing. It arouses their suspicions. It gives rise to distrust, and it makes no difference whether it is customers or employes who are concerned. Ill will rather than good will results. The people as a whole are perfectly willing to pay those from whom they demand service.

It is only beggars who ask for and accept charity and beggars either do not have or will not spend money. The more they are given the more they demand. This class of human beings never make a business prosper. Therefore, when considering the question of service, the dealer and contractor will do well to make certain that he is not offering charity rather than service. Service means better business. No one but a very rich man can afford to be over liberal in the way of charity.

Radio Prize Awarded

The Morris Liebman Prize, the cash award made each year by the Institute of Radio Engineers to that member of the Institute who is considered to have made the most important contribution to radio art during the preceding twelve months, has just been awarded to R. H. Heising of the Western Electric Company for his analysis of vacuum tube action and his research work on modulation systems.

The man who gives better service than his competitor will be found out sooner or later.

Closer Relationship of Central Station and Electragnet

By C. C. BAINES

Why These Interests Should Work Together is Clearly Set Forth in This Paper Presented at Eighteenth Annual Convention of Indiana State Association

That a closer relationship should exist between the central station and electrical contractors and dealers is a fact which I believe will today be granted without discussion. The central station needs the coöperation of the electragnet as much as the electragnet needs the coöperation of the central station. Both have their place in the world today. Both must function with each other to work out problems which present themselves daily.

There has been in the past in a great many localities anything but a spirit of unity between the central station and the electragnet. The electragnet has been prone to knock the central station rather than boost it. If we will investigate carefully we will find that there is an underlying reason for this condition of affairs, and I will endeavor to point out as many as possible of the grievances which the electragnet has against the central station.

Before the Electragnet

Back in the early 90's when electricity was first being made use of for light and power purposes, we find that there

existed no electragnet. What at that time took the place of the central station did not only the work of electrical construction but also managed the sales of what few electric appliances then existed. There was no electrical contractor.

As time went on and the central station came into its own there arose the demand for the electrical contractor, and naturally the central station, which had controlled the electrical field prior to the advent of the electrical contractor, felt somewhat as though the contractor was an intruder in its field. As the electrical industry was developed the contractor added to his line the sale of electrical appliances, and more and more the central station looked with anything but a coöperative feeling.

First Evils

One of the first breaches that existed between the contractor and the central station was the practice of the central station replacing carbon lamps without cost to its customers. With the advent of the mazda lamp the practice of replacing lamps free of charge was re-

placed, in a great many localities throughout the United States, by the practice of selling lamps at less than list price.

This practice no doubt was made in order to control the sale of mazda lamps. Perhaps the central station will say that the public demands this practice. But if the public demands this practice it seems rather strange that the public would purchase millions of lamps per year from the electrical stores and pay the standard list price established by the manufacturer even though it knows that it can purchase lamps at a discount from the central station.

Is it logical to think that the practice of replacing blown fuses is another demand of the public when we find on investigation that thousands of dollars worth of fuses are sold annually from places other than the central station?

Practices Condemned

The practice of repairing appliances, sold by the central station without cost even though the guarantee has expired is another practice which seems to me



Attendants at the Eighteenth Annual Convention of the Indiana State Association Held in October Had Their Pictures Taken in the Famous Riley Room of the Claypool Hotel, Indianapolis. W. H. Morton, Former General Manager of the National Association, is Shown in Center of Photograph, Back Row, With A. B. Harris, Indiana State Chairman at His Right, and Special Representative Davis at His Left

is to be condemned. Likewise the practice of the central station of selling large motors and installing them at cost is most unfair to the electrageist. I have often come in contact with cases where appliances have been sold on terms which have extended over a period of two years or more. Is this fair?

This selling of lamps at less than list; this replacing of blown fuses without cost, and numerous other conditions just mentioned, certainly do not add to the income of the central station nor at the same time could it offer a coöperative spirit between the central station and the electrageist.

In this day when central stations are asking for, and no doubt need, increased rates to cover the enormous advance in overhead expenses, it seems to me a rather ludicrous condition to allow this source of income to escape.

It is folly to believe that the public demands practices of this kind. For we believe that no sensible person would expect a central station or contractor to replace blown fuses or sell lamps at less than list. It is true that the public will accept these privileges if they are offered. But I believe you will agree with me that the public as a whole is not unreasonable in its demands.

Public Unfair

The fact that lamps and appliances are oftentimes sold at less than list brings from the public the statement that the electrageist who does not cut the price is holding the prices unfairly. I have heard of appliances being guaranteed by central stations for an indefinite period of time. But I also think that no sane person today expects any kind of appliance to last forever. Of course as long as the public is furnished with service of this kind it would be foolhardy indeed for them to reject it, but I again ask does the public demand it?

It seems to me that the establishment of subcollection departments in the store of the electrageist is an excellent means of getting closer coöperation between the central station and the electrageist. This would also afford a much better means of collection as far as the public is concerned, and would tend to establish the fact that the central station was endeavoring to render better service at all times.

Could Pay Bills Promptly

The housewife could pay her bills

more promptly without a trip to the lighting company's office. Then some month when she did not understand why her electric bill was so high she could feel that by asking her electrical dealer she would get an answer which would be given in her best interest, rather than a stock reply from one of the clerks in the lighting company's office.

We all know how ready the general public is at all times to criticize a public utility and particularly a central station. It therefore seems only logical that the central station should do all in its power to avoid criticism. There is no question that the local electrical trade can always exert a very powerful influence on public opinion.

Electrical contractors, dealers, and their employes are in constant contact with the lighting company's customers. Their opinions are therefore consulted quite frequently regarding service trouble, high bills and so forth. The kind of an answer will therefore depend largely upon the attitude of the electrageist based upon the treatment which he feels he has had at the hands of the central station.

Valuable Contact

To show the attitude of some central stations toward the electrageist permit me to quote the words of C. C. Lovejoy, commercial manager of the Ft. Smith Light and Traction Company: "Have you realized that every contractor-dealer in your city is a personal salesman (without pay) for your central station, preaching the gospel of your business, working for your profit; that every electrician he employs can be made a good salesman for you; that their wives and their children, relatives and friends can all be made boosters that will build up your load, stop unfair criticism of the electric lighting company, and put electricity over?"

So in conclusion I desire to say it is my honest conviction that the central station will find the electrageist ready to meet him more than half way in working out a policy of better coöperation. The electrageist does not expect the unreasonable, as has been demonstrated in numerous cases in the immediate past where central station and electrageist have come together and worked out their individual problems as one.

Ever ready to boost one another with increasing confidence in each other, ready to coöperate to the limit, and always willing to serve each other, is the

spirit which should exist between the central station and the electrageist.

Buying for Turnover or for Speculation

By I. L. FAUCETT

From a Talk Given at the Recent Tennessee State Association Convention

I will confine my remarks to just one or two points on the question of the advisability of buying on stock turnover or buying for speculation.

In all buying for speculation or to take advantage of an advance in the market there are several questions involved—first the question of capital. Are we using our own capital, or are we borrowing money and paying interest on it? If we are using our own capital, could it not be employed in other ways to bring us a good return? If we are borrowing, the interest charges must be charged against any profits that we might make on any transaction.

In addition to this there is the question of extra cost of hauling, storing, and depreciation. We might argue that there is no depreciation on an advancing market of this kind but I venture to say that no one of us ever bought a large quantity of any given article that when we cleaned it up we did not have some rag tags and bob tails at the end that were not clean. Usually we have to sacrifice considerable of our price and profit to get rid of these.

Usually the speculations are made in what we might term staple articles and they usually carry only a small margin of profit. We undertake to increase this small margin of profit theoretically when as a matter of fact we usually use our speculative purchase as an advertisement and sell the goods under the market in order to unload them quickly and get our money out of them before there is a possibility of a change in the price. This means that we are going to devote more time and energy to selling these goods than we should, as compared to the more profitable lines of merchandise or work.

We are going to take from the sale of profitable lines some of our energy and devote it to unloading this speculative purchase. We are going to find that the volume of our business runs up from the forced sale to this speculative purchase, and unless we are very careful this will fool us into thinking that we

are doing a large volume of profitable business, when as a matter of fact we are neglecting the profitable end of the game for the unprofitable staples of this speculative purchase.

On the other hand, if we buy simply

for our requirements just as we would on an even market, considering of course that demand is strong, deliveries may enter into it and cause us to have to buy a little more heavily than we have. In the long run we will make

more money out of the purchase for our requirements or for turnover than we will in the speculative purchases. Besides the element of rise is always there when we load our warehouses or store rooms with material not needed.

Ohm's Law Applied to Merchandising

BY CHARLES HENRY MACINTOSH

President of Advertising Clubs of the World Makes Striking Comparison Between Theory and Practice in Talk Before Executives' Convention

The following extracts from talk of Charles Henry MacIntosh are printed through courtesy of Beardslee Talks:

Ohm's law states that electrical pressure, measured in volts, divided by resistance, measured in ohms, equals flow of current, measured in amperes. We may apply the same law to the merchandising of any article by defining volts as the amount of sales pressure exerted by the salesman, ohms as the amount of sales resistance inherent in the customer (reluctance to part with his money), and amperes as the volume of sales. It is clear then that in order to increase the volume of sales we must either increase the sales pressure or reduce the sales resistance. In other words, the reluctance of the customer to buy must be overcome by the salesman's desire to sell.

The Buying Idea

Every actual sale is preceded by a mental sale. The sale really takes place in the customer's mind, and the exchange of money for merchandise is merely the final act in a train of events that collectively constitute what we call the sale. The mind, therefore, is the thing we must work on. But how? That word IDEA which I have used in connection with the phrase "buying idea" gives us the clue to what must be done.

- I—stands for INTEREST
- D—stands for DESIRE
- E—stands for ENTHUSIASM
- A—stands for ACTION

These are the four steps that lead up to and result in a sale. First we must get the buyer's *interest* in the merchandise offered. This may be accomplished by advertising, by show window displays, or in any of the many ways in which a person's attention is attracted to an article of merchandise. Next we must create *desire* to possess the article, for

interest without desire does not result in action.

When a customer comes into your store to inquire about a particular article the first two steps toward the sale have as a rule, already been taken. He



Charles Henry MacIntosh

(or she) is interested and desire, to some extent, has been created.

Instill Enthusiasm

Now is the salesman's opportunity to instill *enthusiasm*, which is the third step in selling. Enthusiasm is desire raised to the *n*-th degree. A woman who is merely mildly interested in an electric washing machine, or vacuum cleaner, may be enthused by a demonstration, if the salesman by his comments while the demonstration is in progress keeps constantly before her the idea of self interest—pointing out how the possession of the particular labor saving device under consideration will lighten her household duties.

In every sale the customer mentally weighs a certain sum of money (the pur-

chase price) against a certain service and then weighs the value of this service against some other service that an equal sum of money will buy.

Desire generally outruns income, and when you are talking to a woman about a washing machine she may be saying to herself that for the same sum of money she could buy a talking machine she has long wanted and is imagining how well it would look in a corner of the living room, and what fun they could have fox-trotting to its music. You have got to get her enthusiastic over the washing machine to dispel this conflicting buying impulse, or her money will go into the cash register of the talking machine dealer instead of into your cash register.

Final Step in the Sale

Interest, desire and enthusiasm lead to *action*. This is the final step in the sale. Little by little, as the sales pressure of the salesman has increased, the sales resistance of the customer has diminished, until at last there comes that joyful moment when the customer says: "I'll take it," and the sale is made!

Voltage divided by resistance equals amperes. Sales pressure divided by sales resistance equals volume of sales. Just at present the ohmic resistance of customers is higher than usual, but this does not mean that sales cannot be made. It does mean, however, that the low voltage sales methods of past years will no longer do. The stores have the merchandise, the people have the money, and all that is needed to get the merchandise moving to the people and the money to the stores is more *high voltage* salesmen.

Approximately 70,000 American soldiers died of all causes in the World War. Tuberculosis killed 150,000 men, women and children in the same period.

A Foot of Selling Space Worth Three

BY DR. NORRIS A. BRISCO

Director of New York University Training School for Teachers of Retail Selling; Formerly Director of School of Commerce of Iowa State University, Etc.

"The chief reason why my store has been so successful in a merchandising way is that I sell six floors of merchandise in a two story building," a small town merchant well known for his progressive merchandising methods told me the other day.

In other words, the merchant gets as many sales out of one square foot of space as some other dealer, less enterprising and less scientific in his merchandising methods, gets out of three square feet of space.

In these days of space economy space counts for a great deal. Eliminating the important item of rental, the merchant who can get more sales out of his store space shows himself a real up-to-date merchant.

Did you ever make it your business to try to find out what portion of your store space is the best selling space? Do you know what goods can most appropriately be displayed in a certain part of the store?

I am not proposing an entirely new idea in merchandising. The sales per square foot idea has already been extensively used by most of the department stores in the country. With the department stores merchandising has been reduced to an exact science, and there is no earthly reason why the lead should not be followed by the specialty dealer.

Floor Space Worth

Go to any merchandising man of a large department store. He can lay his finger on any square foot of space in his store and by referring to his card index and chart can tell exactly how much each unit of store space is worth to the store owners in dollars and cents. He can refer to two units of space in different parts of the store and he can tell exactly how these compare in point of selling efficiency.

What purpose do these figures serve the merchandising manager?

First of all, the merchandising manager knows exactly what part of the store is most valuable in sales returns. He wants to conduct a special sale, and he desires to display his good where

they will have the greatest attraction to the shoppers. He knows by referring to his records just what store space will serve the desired purpose.

He knows that a certain article will sell better on the second floor of the building than if it were displayed on the first floor, for he may have found by experience and due investigation that the second floor always attracts a better class of customers.

Other Important Factors

There are numerous other factors involved, and the one I am going to mention is a very important one. Several years ago the directors of a certain department store found themselves pressed for space. As no additional space could be obtained the store directors decided that the only solution was to increase the sales per square foot of the store.

They took a rule and measured off the selling space in every department of the store. After totalling the number of square feet they took a total of the rent paid for the entire building. They then allotted percentages for each department of the store, based on the proportionate number of square feet in each department.

A conference of department heads was called, and this was the proposition put up to them: "We are pressed for space. The store is already small for the enormous business we are doing annually. In order to make the most of the situation we must increase our sales for each square foot of ground. We must make the most out of every square foot of ground. Therefore, we are going to rent out a certain number of square feet of space to each department head. The store auditor will credit you with monthly rents on these space allotments."

All Items Considered

Not only is the proportion of store rent credited to the department head, but the latter must also share in the store's expenditures. The store auditor credits each department head with so much for rent, so much for light and heat, so much for salaries of salespeo-

ple employed in the department, so much for depreciation of merchandise—and even advertising and delivery expense are apportioned among the various department heads.

The store directors get together at regular intervals and reapportion these items in accordance with new conditions. They go over the statistics of sales and profits in each department. They can tell whether the sales have increased and whether the overhead is eating into the profits.

If any of the actual expenditures in the department exceed the expenditures allotted by the store auditor the department head is credited with the difference, and he must watch his step thereafter to make up for the difference. This system has created a condition where there is continual competition among the department heads for best showing.

The net result has been a decided saving in overhead. Each department head feels his responsibility in the management of the store. Under ordinary conditions he wouldn't worry his head over delivery expenses and rentals.

Quick Checking Easy

The store management has found it profitable in other ways. It is far easier to size up a situation when you have facts about a particular department at your finger tips. If something goes wrong in a certain department the store owners do not have to rummage all over the store to find the cause.

An investigator employed by a large research organization recently stated that it is very difficult to get a customer to buy on any floor above the fourth floor of any department store. At the same time, he stated, it is not always true that the best selling space is on the first floor of the building. He derived his conclusions from a study of sales per square feet records of a number of department and specialty stores.

The owner of a small retailing establishment need not bother getting up elaborate charts and tables of sales. He can keep close watch on the sales of his various articles. He can compare the

sales of articles on various counters and sections of the store, and find out whether the respective sales could not

be increased by a proper relocation of goods. If there are several floors of selling space, let the merchant compare

the sales of the store, and find out why the sales of one floor exceed those of another.

Benefits and Importance of Local Associations

BY H. SHAW

Paper Read Before the Annual Meeting of the Michigan State Association at Grand Rapids on October 20th

All organized group effort whether national or state requires and provides for local group effort. It is impossible for a national or state organization to properly function without local groups having a place in the scheme. Our National Association can and does handle national undertakings, things that cannot be accomplished by locals and states and for the same reason locals can handle things that the state or national cannot control.

I sometimes think that the National Association receives a great deal of unjust criticism for not doing this thing or that thing that some local organization feels is necessary to its particular welfare. Perhaps it is necessary to its particular welfare but at the same time it is beyond reason to expect the national to handle it. If the national attempted to function for all locals in local matters, it would have an organization so unwieldy that it could not be controlled.

So I believe that local associations have a place in the National Association's scheme and that locals are absolutely necessary to the welfare of individual contractors operating in given localities. If more contractors would definitely settle in their own minds what is possible for the national to do and what is up to the local contractors to do, they would feel better toward the national and would devote more time and thought to keeping up a live local organization.

Local associations are as necessary as a National Association, and many things that they can do are just as beneficial to the local contractor, or more so, than things that the national can do. As secretary of the Detroit Electrical Contractors' Association for the past two years I can see more fully than ever the need of local organization.

Local Tie in With National

There is not a town or city in Michigan but what should have a local asso-

ciation which should tie in with the state and national. If the electrical contractors would only realize what it costs them in dollars and cents to keep apart, they would get together and stay together. The public does not want you to organize because you might learn where you are being used to your own disadvantage, and if you would get together with your fellow competitors you undoubtedly would learn that some builders and owners are using you as a tool to make money for themselves at your expense.

You have chosen the electrical contracting business as your means of livelihood. You have invested your all in it and to allow the buying public to take your all from you is wrong, and it is doubly wrong to allow them to take your legitimate profit away when they use your competitor to do it with. Just so long as builders and buyers of electrical work can keep electrical men apart and keep enmity and ill will between them, just so long can they cash in on it at the expense of the electrical contractor.

You know what I have said is so and perhaps that very condition exists in your town. Are you going all the way to help bring harmony between you and your competitors? Remember that the plumber, the druggist and the dry goods man don't give a darn whether the electrical contractors starve to death or not. There is nobody interested in your success more than you are, and next to yourself there is nobody that can help you be successful more than your competitor can.

Coöperating With Competition

You and your competitors in your town have the electrical business in your own hands. Are you using it to render a service to the public for which the public should pay you a fair percentage of profit? Or are you using it to wreck your finances and the finances of your competitor and thus giving to the

public that which they are not entitled to and that which they do not get from other lines of trade?

When you buy a pair of shoes, a suit of clothes, or an automobile you know that the seller is getting a profit out of it and you expect him to. Perhaps it hurts you to recall that you did a job for this shoe dealer or clothier and you didn't make a nickel because your competitor wouldn't let you. Now are you quite sure your competitor wouldn't let you?

It is possible to write a book on the need and value of local associations because there are so many things that they can do to make business more pleasant and profitable to those engaged in it. For example, if some of you were to talk over with your competitor some job that you didn't make a profit on because your competitor wouldn't let you, it would be a wonderful education to both of you.

I believe that local association effort should be based on education and that Bill Goodwin was absolutely right when he said the trouble in the electrical business is that we don't know our business. If you haven't a local in your town, form one at any cost and get together and compare data. When I say compare data, I mean study the business of electrical contracting in your particular community and study it in the company of your fellow competitor. You will all be surprised to know how much you don't know.

Some Dangerous Practices

Keep away from price fixing or comparing figures before jobs are let, also keep away from trying to establish prices. It can't be done and your local is stopped before it starts if you use artificial means such as price fixing. It is illegal, and even if it wasn't, it wouldn't work.

If you will teach yourself and your fellow competitors all you possibly can about costs of conducting the electrical

contracting business and costs of doing various classes of work, price fixing won't be necessary. Remember, however, that it is useless for you to know all these things unless your competitor knows them too because he's the fellow that won't let you sell your job at a profit because he doesn't know his business. Get him in a corner and then get him and his fellows to join your local.

Your business success depends on your competitor's knowledge of his business. See that he gets the knowledge.

The Detroit Local carried on educational meetings all last winter that consisted of real education along both mechanical and business lines. We placed jobs of all kinds and descriptions on the blackboard and had the men estimate them during the meeting. These jobs were of course confined to comparatively small work in order to allow of them being figured within the time of the meeting.

From what I have seen of the results of this method of education I am satisfied that it has been very valuable to our members. When a certain job had been estimated, the figures were all turned in to the chairman and those men whose figures were extremely high or low, were asked to go up to the blackboard and explain their layout; with the general result that they learned something that they didn't know before. In general this kind of educational work is particularly beneficial to all who take part in it.

Proper Business Methods Essential

At other educational meetings the business end of the business was taken up. This included proper record keeping, bookkeeping, overhead and how to determine it and how to apply overhead and profit to arrive at a correct selling price. We also had able speakers talk on salesmanship, and in this connection I might say that our local is planning to secure the services of one of the best sales experts in the state to give a series of lectures on salesmanship as part of our educational program for the coming season.

The two things that I believe are the most important to any contractor are salesmanship and knowledge of costs. One is useless without the other. You won't get far if you are able to sell a man a job if you are not sure that your price is right. Neither will you get

far if you have a right price and no ability to sell it to the customer.

Know your costs and know how to sell, and then you have a combination hard to beat. The only man that will beat it is the man who does not know his business, and it is up to you to get him in your local. When he knows the business end of his business as he should know it he will be a fair competitor without any artificial means of trying to force him.

Too many men go into the electrical contracting business with a thorough knowledge of the mechanical end of the game and no knowledge of the business end of it. Your success as an electrical contractor depends about 95 percent on the business end of the business rather than on the mechanical end.

It is an easy matter to hire mechanics to work with their hands at so much per hour but *you* must run the business end of your business. It is safe to say that most of the failures in the electrical contracting business are due to lack of business knowledge rather than to lack of mechanical knowledge.

Every town can and should have its local association which should be tied with the state and national associations if you ever hope to improve the business that you have chosen as your life work.

Purpose Is Not Sectional

**Leading Publication of Electrical Press
Deplores Break on Pacific Coast**

Under date of November 12 the Electrical World published the following editorial which was written by Earl E. Whitehorne, its commercial editor, and which was appropriately captioned "The Interests of Electrical Men Cannot Be Sectionalized":

"Electrical men throughout the country are distressed over the situation which has arisen between the National Association of Electrical Contractors and Dealers and its members upon the Pacific Coast. For the electrical industry is more than a mere local business. It is a great evolutionary force which is molding new industrial, social and economic conditions throughout the world. It is a fountain from which is flowing an idea that has spread the length and breadth of our country until it has come to be an influence in every home, in every life.

"The purpose of electrical men in the North, the East, the South or West is ever the same—to carry electricity into all homes and industries for saving labor and improving health, comfort and happiness. There is nothing sectional about this common purpose, nor in the way they go about it in any state.

"In recent years, however, there has developed a feeling in more than one locality that conditions there are 'different,' and that because of intervening distance, the affairs of the Coast, for instance, must be considered as a sectional problem. This sentiment has led to unfortunate misunderstanding between the contractor-dealers of California, Oregon and Washington and their national headquarters in the East, which has culminated in the actual secession of these three groups from the national body. And there it stands—a dangerous precedent.

"The principle of national organization, interdependence and solidarity is as deep and as broad and as enduring as the nation itself. The arguments for membership in any such national association are many. The argument against it cannot be weightier than that



Impressive Display of Edison Lamp Works Makes Use of S. E. D's. Santa Claus to Radiate Christmas Spirit of Buying

it does not pay its cost—which in the case of the contractor-dealers averages, across the country, but \$12. This would seem to be a small amount to pay for the advantages that could be made to accrue from national contact, national coöperation in any national association work.

"But this is more than just a controversy. There is a broad living principle involved, for the West needs the East and the East needs the West. No man can say that the East has no concern with West Coast agriculture products, for instance, or that the West does not depend upon the East for capital and for manufactures. Nor could he say that such a sectional policy can be right unless he thinks the Coast should fight its battles unassisted if a war should come with a Pacific power—which God forbid!

"There are tremendous possibilities in local work among electrical men on the Coast. No doubt of it. There is need for local work in every state. But these local activities *can* be coöordinated with national plans and achievements, and membership in a national association *can* be made worth its cost to electrical men everywhere. It is to be hoped that further thinking will lead to a sensible adjustment and cure this apparent breach between two sections of an industry whose broad interests actually cannot possibly be separated."

Increasing Business by Preventing Tuberculosis

Money Used to Prevent This Disease is a Good Investment

Every worker who is interested in his job today knows the amount of attention which is given to prevention of waste. But much more is heard of the loss by waste of material than of the far greater loss by waste of man power. Yet, the economic loss to the nation due to deaths from tuberculosis has been estimated to be more than a half billion dollars each year.

Tuberculosis has been called the "disease which kills producers." For one-third of all persons who die between the ages of fifteen and forty-five are victims of this preventable and curable disease. The nature of tuberculosis is well known today and numerous, carefully conducted studies have demonstrated that its existence depends to a great extent upon conditions in which men work. There

are naturally some particularly bad features about certain trades. Chief among these are the dusty occupations, for dust inflames the air passages of the lungs and makes these passages liable to the disease.

Not all dusts are dangerous, however, for coal dust apparently has no bad effect. Coal miners are even less likely than others to have the disease, and only one-third as many cases of tuberculosis appear among the coal miners in Pennsylvania as among other persons.

Of the trades that show a high mortality for tuberculosis, there are first, the grinders, then tool makers, brass workers, printers, stonecutters, glass cutters, potters, textile mill operatives, and all trades to which there is exposure to mineral and metal dusts. On the other hand, boot and shoe makers and millers have a very low mortality rate for this disease. In mining and the related industries, the death rate from tuberculosis, with the exception of coal miners, is higher than for other work among working men and working women. This is particularly true of certain mining industries such as copper, silver and lead mining. The reason for this is apparent as such mining is attended in most cases by the entrance of particularly hard, sharp, flinty particles, which find their way into the lungs and set up an irritation which makes fertile soil for the growth of the tuberculosis germ. Significant in this connection, is the fact that out of the 38,000,000 men and women workers in the United States nearly 4,000,000 or about 10 percent are employed in dusty trades and occupations.

That it pays to prevent tuberculosis in industries is well demonstrated in the experience of many of the largest concerns in the country. The actual dollars and cents saved to these concerns as

a result of health work aimed against tuberculosis has demonstrated the value and soundness of their investments along this line. It not only pays to prevent tuberculosis directly in industries but it pays also to prevent tuberculosis in the general population, of which the workers and employers are a part.

There is abundant evidence that any community can purchase a reasonable degree of freedom from tuberculosis if it is willing to pay the price. This price is not excessive, probably not more than \$2 per year, spread over a period of ten, fifteen or twenty years.

It is obvious that every person whose life is prolonged by the prevention of tuberculosis means increased wealth to the manufacturer and merchant because of the added working capacity of the individual. Nor is prevention a far away and hazy mirage. The fact is that the National Tuberculosis Association and its twelve hundred affiliated agencies are fighting a winning war against tuberculosis. In the fifteen years since the association began its work the death rate from tuberculosis in this country has been reduced from two hundred per one hundred thousand population to the present figure of one hundred and twenty per one one hundred thousand population. This has been estimated to mean a clear saving of seventy-five thousand lives a year.

Thus, it has been clearly demonstrated that proper community organization can control disease and extent of control is dependent upon the intensiveness of organization. The sale of Tuberculosis Christmas Seals furnish the funds and these seals are now being offered throughout the country. Every person who buys Christmas Seals is helping in a fight to conserve human life and therefore to prevent a waste of manpower in business.



An Appealing Window Trim Setting Forth Individual Ownership of Christmas Tree Lighting Outfits—Display of Edison Lamp Works of General Electric Company

• CONTRACTING •

A Department Devoted to the Study and Discussion of the Practical Problems of Electrical Contracting

ALLAN COGGESHALL Associate Editors HENRY F. RICHARDSON

Miscellaneous Signalling Systems

By the term "miscellaneous signalling systems" it is meant to include those systems sometimes referred to as "low potential" or "low tension" systems such as telephones, push buttons and annunciators, electric clocks, fire alarms, etc. The wiring for such systems very often does not receive the consideration which it deserves. An architect or engineer will write thirty or forty pages of specifications describing the light and power wiring and will then cover the signalling system in a page or two, yet the cost of the signalling system may be several times the cost of the light and power wiring.

Generally the cost of the signalling systems in a bank or insurance company for instance is considerably greater than the other wiring. The cost of maintenance is usually still greater. Many buildings maintain a man or sometimes a dozen or more men to keep their bells or telephones in order while the lighting system requires relatively little attention. In spite of this great care is taken in installing the lighting wiring and often any old thing goes for the bells. This condition certainly accounts largely for the high maintenance cost of the signalling wiring. The additional cost to install a system properly is probably very little and certainly will be repaid in lower maintenance and continuity of service.

The fact that the underwriters rules place little or no restriction on the method of wiring signalling systems is probably the principal reason for the lower standards for such wiring. The Underwriters are of course interested more particularly in the fire hazard and this is less with the long voltage generally employed for signalling systems although fires are often caused by such wiring. However, the owner is interested in satisfactory service and lower maintenance cost.

Generally the fundamentals of light and power wiring methods should be applied to the wiring for the signalling systems. Wires should be in conduit or otherwise properly protected. Rub-

ber insulated wire of the lightest grade should be used except where lead covered silk and cotton or paper insulated cable may be economically and properly used. All apparatus should be as substantial as the higher voltage equipment. The system of distribution should be carefully studied rather than simply to run wires the easiest way to accommodate the original installation.

Splices should be soldered and properly taped and in general every reasonable precaution should be taken to minimize future trouble. A system of cheap apparatus connected by cotton insulated "annunciator" wire and with the wires simply run between buttons and annunciators by the shortest route will of course be cheaper in first cost than a first class system but in the long run will certainly prove the more expensive. The contractor can do a great deal toward educating architects, engineers and owners in this direction.

Push Button and Annunciator Systems

In laying out a system of push buttons and annunciators obviously the cheapest method is to run a wire directly from each button to the annunciator drop which the button is to operate. This might be perfectly

satisfactory if no changes are ever to be made either in the location of buttons or annunciator, etc., and if no trouble should ever develop in the wiring. It is strongly to be recommended that a bell system of any size at all be laid out with a center or centers of distribution. Wires from all buttons and from all annunciators should then be installed directly back to the center of distribution or inter-connection box or in the case of a large system, to the nearest subjunction box. Terminal strips should be installed in boxes at these points providing a terminal for each wire.

Where there are several inter-connection boxes these should of course be connected together by cables. Such a system has many advantages. Lead covered silk and cotton insulated cables may be installed from distributing points to large annunciators, push buttons, etc., reducing the size of conduit required as well as being more economical in itself than rubber insulated wire. Also there is less liability of future trouble in a lead covered cable properly installed. With a system designed in this way, by installing a few spare wires from each button location to the inter-connection box, then if at a future time it is desired to add a call to any annunciator in the system it is only necessary to make the necessary connections in the inter-connection box or boxes.

In a system where changes are at all frequent this is very important. Also in case of trouble with any wire or drop on an annunciator a spare wire or drop may be used simply by changing the connection in a box. Records are much easier to keep and trouble much easier to locate in a system with inter-connection boxes. In case of change in location of any annunciator or button a new cable or new wires may be installed from the nearest inter-connection box to the new location without disturbing any other wiring than that directly affected by the change and without making any splices.

Inter-connection boxes may be of



Close up View of Separable Connector With Desk Moved Aside to Expose Fitting Together With Lighting Plug

wood or steel. Steel boxes will often be found little more expensive and much more satisfactory especially for the termination of conduits. It is to be recommended that all cables and all wires coming to each box be terminated on separate terminals and that all connections between such cables or wires be made by means of short jumpers or "cross connections." "Form strips" and "bridle rings" should be installed to keep these cross connecting wires in order.

There are a number of types of terminal strips which may be used in these boxes. Probably the most commonly used is the Western Electric No. 6 type which is used by most telephone companies. This is simply a strip of composition with "locknut" terminals moulded in, "fanning strips" must be used with these strips consisting of a maple strip with holes spaced to correspond with the terminals and designed to be attached to the box with screws beside each terminal strip. The Western Electric Company also manufacture several types of strips with terminals designed for soldering connections but while these probably make a very fine job and may be desirable for certain classes of telephone work, they are more difficult for the average electrician to handle. With most types of strips where lead covered silk and cotton insulated cables are used it is necessary to "form" and "lace" the cables at terminal strips in order to make a neat and workmanlike job. This usually requires an electrician who is skilled in this branch of the work. The Auth terminal strip is designed to eliminate the necessity of "lacing" and incidentally saves considerable space as the cables are installed behind the terminal strips, and form strips are integral with the terminal strips. A very neat job may be made with this type strip by wood gutters in inter-connection boxes similar to a lighting panel board, thus concealing all cables and leaving cross connections only exposed.

One of the principal difficulties in testing for trouble in a bell system lies in the fact that such systems generally are designed with common battery wires, that is with one wire only for each button, annunciator drop, etc., and with one battery wire only for a bank of buttons or for an entire annunciator. In fact systems very frequently provide one common battery wire for all buttons and one common battery wire for all annunciators. To locate

trouble such as a ground on any particular wire therefore this common connection must be temporarily broken otherwise the ground will appear to be on all wires. Unless some provision is made the battery wire must be cut and later repaired. A much better way of taking care of this is to provide some means of opening these wires in the inter-connection boxes.

One method frequently used is to terminate all battery wires from push buttons, annunciators, etc., on separate terminal strips of the locknut type, all wires being connected to the locknuts on one side of the strips. Two strips are generally provided, one for each polarity. The locknuts on the opposite side are then tied together and to the corresponding battery feeder. Connections are then made between the locknuts on opposite sides of the strip by small brass or copper strips, slotted so as to slip in or out easily. Such strips may be obtained from the Western Electric Company equipped with small fibre handles to facilitate their use. With this arrangement testing is much simplified.

Obviously it is very desirable to split up battery lines as much as possible. The best practice is to install a separate battery line to each annunciator or to each bank of buttons. This not only simplifies testing but in case of trouble the button or annunciator affected may be cut out of service by opening the battery line and without interfering with the operation of the remainder of the system.

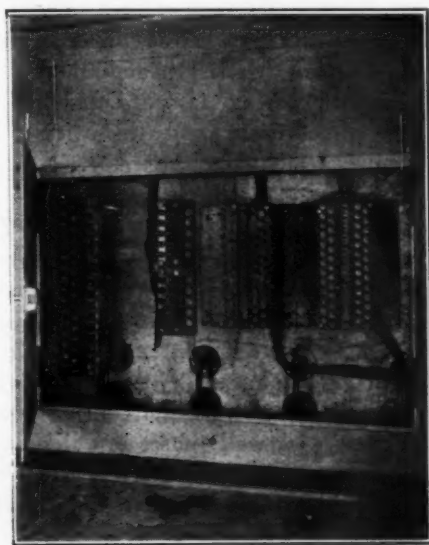
It is very desirable that all battery wires be fused not only as a protection

against fire but to prevent running down the battery. Such fuses should be as small as possible. Where battery wires are arranged as above described on terminal strips fuse wire is sometimes used between the opposite locknuts instead of the small metal strap. However, these wires are rather difficult to remove and replace for testing. A special type of terminal strip manufactured by the Auth Electric Company provides a very small knife switch with fuse gap for each connection.

Another aid to locating trouble in a bell system as well as an assistance in the original installation is in the use of a number of different colored braids on loose wires. It is well to adopt colors for battery wires, say white for positive and black for negative, which should be followed throughout the entire system.

In laying out conduits for a bell system the simplest method might appear to be the installation of a conduit from an inter-connection box looping through a number of push button or annunciator outlets. Disregarding the possibility of future changes this may be satisfactory for a small system where loose wires only are used, but where cables are to be used a separate conduit for each cable is desirable, unless a conduit or duct large enough to contain the necessary number of individual cables is used. It is very poor practice to splice or otherwise break the lead covering of a cable in a floor outlet; in fact any splice in any wire in a floor outlet is a potential source of trouble and should be avoided. It is far better to make all connections above the floor line.

Even in a wall outlet a splice is usually a source of trouble unless the box is of sufficient size to easily contain the splice without cramping. Where equipment is to be wired from a floor outlet the wires or cable may be extended up through a short length of pipe screwed into the floor outlet and terminated on a terminal strip attached to the furniture on which the apparatus is located or mounted on a light strap iron frame attached to the pipe extension. The use of terminal strips allows the usual flexible connection to the apparatus to be readily made and also facilitates keeping of records and testing and avoids the necessity of a splice. If the furniture on which the apparatus is to be located, is to be moved away from the outlet at any time for refinishing, to install a large rug, etc., then it is much



Interconnection Box Showing Different Types of Terminal Strips With and Without Fanning Strips Integral to Strips

easier to disconnect the flexible cable from a terminal strip than to disconnect and reconnect a splice.

Where there is any probability of frequent moving special terminal strips are frequently used. The usual lock-nut strips may be sawed in half lengthwise and slotted metal extensions firmly attached to one side and arranged to engage with the corresponding lock-nuts on the other half. The two halves must of course be supported in a suitable manner. When it is desired to remove the equipment the locknuts on one side may be loosened and the two halves separated without disturbing any wires.

Another form of strip which may be used is the Auth separable connector which provides in a very compact form a plug and receptacle connection for each wire moulded in a composition block. With this device it is only necessary to pull the blocks apart to remove the equipment. These are usually furnished in enclosed conduit type fittings designed to be screwed on to the end of the short piece of pipe from the floor outlet. These fittings are also furnished in flush type plates for use where equipment is wired from a wall outlet.

The use of such fittings has another advantage in a new installation. Ordinarily the wiring for a bell system cannot be tested out and connected until all work of a nature which might damage the wires or apparatus is completed. In fact the system cannot be completely connected until the furniture is in place. However, the owner usually wants to occupy the building as soon as the desks are in or very shortly thereafter.

In a large bell system this means leaving a great amount of work to be done in a very short time which involves bad workmanship due to haste and usually much expensive and unsatisfactory overtime work. If some form of separable connecting device is used however all wires up to these strips may be tested and connected. The apparatus may also be attached to the flexible cables and to the separable part of the terminal strip all this work being done long before the building is in condition to receive furniture. All connections should be made from a wiring schedule. Then when the building is completed it is only necessary to connect the two parts of the strip together or in the case of the Auth connection simply to insert the plug section into the receptacle section.

Where apparatus is to be built into

furniture or where cables must pass through holes in furniture arrangements can usually be made to install such apparatus and wiring in the furniture before the furniture is installed at the building. In several large banks the electrical contractor has sent men to the furniture factory to install this work before the desks were shipped.

(To be continued)

CODE CHATS

BY HUBERT S. WYNKOOP, M. E.

Monthly Discussion of National Electrical Code Practices by Well Known Authority in Charge of Electrical Inspection, City of New York

Dead-Front Switchboards

Literally, the Code requires these for moving picture establishments, even if there is no stage. We draw a distinction, however, between such a house and one which has moveable borders, footlights, proscenium side-strips, stage pockets and other facilities for staging a regular dramatic or operatic performance.

In the mere picture house, with its footlights and lights outlining the proscenium arch, there is no point in calling for a dead-front switchboard; and in fact the switchboard reduces itself to a simple panel inclosed in a cabinet.

A third class of house with which we have to deal includes lecture halls and school auditoriums. If the stages of these rooms are equipped for the giving of operatic or dramatic shows, we class them as theatres; but if, as is usually the case, they are not so equipped, and are used a few times a year for amateur theatricals, additional and temporary wiring is permitted under close supervision, and this wiring is taken from the panel board.

Armored Cable Laid in Masonry

No. 27d required a lead sheath over the insulation of armored cables "when installed in so-called fireproof buildings in course of construction * * * or in damp places. "We permit plain armored cable to be laid in chases in interior brick walls if set in quick drying plaster, but if otherwise laid or buried in any kind of masonry it must carry a lead sheath.

This has been our practice for many years and has proven satisfactory. We also require a lead sheath if the cable

is buried in the mortar of bathroom floors; but it is now quite a common custom to avoid this requirement by carrying plain armored cable *under* the false floor on which the mortar is laid.

Single Pole Switches on Panelboards

This is nothing in the Code which of itself prohibits the placing of single pole switches on panelboard to control the branch circuits. The use of a double pole switch has been so universal that we have grown to believe that there is a rule on the subject. Latterly, we have had submitted to us several makes of very substantial single pole switches which we have specifically approved for panels, and this action has resulted in a material reduction in the size of the boards.

Of course care should be taken that the single pole switch does not violate some other requirement of the Code—as, for example, the rule calling for double pole control of a circuit located in a damp place.

The single pole switch simplifies the panel greatly, as one polarity appears at the right hand and the other at the left, the neutral fuses being grouped together at the top of the board.

Criminal Advertising

Day after day come to me clippings from advertisements in the electrical press, or bulletins of electrical manufacturers encouraging the misuse of electrical equipment. Some of these are barefaced, as : "can be connected to lamp socket," the appliance being a 600 watt grill. Others are better veiled, as: "by attaching the cord socket of the heater to any light socket in the room when the wiring is heavy enough. *If not, use 20 ampere fuse plug that is sent with each heater.*" (The talics are mine.)

In one case the 600 watt appliance is to be connected to a 250 watt socket, probably fed by No. 18 fixture wire; in the other, a 15 ampere appliance is to be connected to a 3 ampere socket and the 10 ampere circuit fuse is to be replaced by one which will not blow under normal conditions.

I don't know how this situation can be cured, except by local agreement among all the electrical dealers to refuse to handle goods thus advertised. Certainly, the troubles which these appliances cause must discourage materially the extended use of electricity.

Sub-standard Devices

Some confusion must always be allowed for in the case of a device which has been approved by the laboratories and thereafter withdrawn from the list. Since the date of manufacture is not—and probably cannot be—stamped on the device, the inspector must often follow his instructions to pass or to reject, regardless of the condition of the device itself.

For example, an approved make of socket suddenly develops defects which lead to its withdrawal from the approved list, investigation having shown that the design has been changed for the worse or that the factory inspection has become lax. The inspector is told to reject this socket, although those which come under his observation are of the old type to which no objection can be offered. Similarly, when the approval is restored the inspector is directed to pass the socket, notwithstanding the fact that those on the job are of the condemned variety which have been on the contractor's or the jobber's shelves for some months.

In either case, the inspection service falls down. There seems to be no way out of this difficulty as the difference between good and bad design is in many instances so slight that the device actually used would have to be compared with a master (or sample) device in order to detect the contrast.

Branch Circuits and Their Fusing

I have found it helpful in analyzing the fifth paragraph of No. 23d to paraphrase it as follows:

1. Two wire or three wire circuits—All branches or taps from any 3-wire system which are directly connected to *lamp sockets* must be run as 2-wire circuits—but this requirement does not apply to taps which are connected to translating devices other than sockets.

2. Fuses in branch circuits—All wires of all branch circuits which are connected to *lamp sockets or other translating devices* must be protected by proper fuses except that the grounded conductor of 3-wire distributing circuits must not be fused—and this requirement applies as far as it may, irrespective of whether the system is 2-wire or 3-wire.

Exposed Receptacles in Theatres

These have suffered so much from breakage that it has become our prac-

tice to accept only such receptacles as are inclosed on troughs or boxes. Contractors seem to appreciate the fact that we cannot afford to take any chances in theatres or moving picture houses, and we have little difficulty in enforcing this requirement.

Ventilation of Booths

It has not always been possible to obtain the prescribed amount of ventilation in booths. For this reason we have been unable to require that the door shall be entirely closed while the machine is in operation.

If the spring-hinged door is held open about a foot by means of a string which can be readily broken, or by a notched stick which can be quickly thrown down and out of the way, this ought to be considered a reasonable provision for an emergency.

Wiring Tables for A. C. Motors

We have consistently refrained from establishing such tables, in the face of a considerable demand therefor. The truth is that we do not know how to prepare tables of this nature owing to the wide range of the inrush currents. We find ourselves faced with the dilemma either of requiring too much copper in many cases, or of accepting in other cases copper so small that we are sure to run into fusing difficulties.

If we specified a certain size of wire, and later found that the fuse required overruns the rated capacity of that wire, we would be debarred from objecting; whereas, what we do is to allow the contractor to choose his own wire size—within limits, of course—and then judge the sufficiency of the copper by the fuses employed under full load. This plan has its drawbacks, but I know of none better.

Proscenium Side Strips

Must these be wired with rubber covered or with slow burning wires? The Code doesn't say; so I think we are free to accept either, except where it can be shown that the slow burning is necessary in order to withstand excessive heat. (I believe it to be generally agreed that throughout the Code "excessive heat" means a temperature above 120°F.

Size of Wire For Signal Lighting

The Code accepts No. 16 for elevator control cables; and it seems proper to permit this size where cables or cabled

wires are used for elevator or hospital signal lights or for carriage calls. We are here concerned with the strength of the bunch of wires, rather than with the ampere capacity of a single conductor.

Builders and Makers Should Get Together

By JANE LAKE

Housewife's Requirements Ought to be Considered in Providing Electric Conveniences

The writer was recently asked to look over a housekeeping apartment in a newly constructed building—in fact it was not finished—with a friend who was a prospective tenant. This apartment seeker was a housekeeper of some years' experience along prescribed lines, but ipso facto, had been converted to the modern plan of cooking by electricity.

The new apartment building which we visited consisted of some eighty apartments of most modern construction, was in every particular high class—the rental fee had not been overlooked when "high" was written into the specifications, either. Everything contributing to modern comfort had been thought of, and every provision had been made for luxury. There only was to be electricity for cooking—and of course for lighting.

The agent exhibited several models of electric ranges of one of the best known manufactures, in case the tenant wished to purchase. He stated that this particular maker had been selected after a careful test which showed the highest excellence, but that it was not obligatory to buy the range through him. However, owing to the new custom of cooking by electricity, the owner had thought it might add to his service and to the convenience of prospective tenants, to have electric ranges on the premises to show.

A certain size and style was recommended, but my friend thought it too small for her use and asked if the manufacturer made a larger model. The agent handed her an illustrated booklet of the entire line and very courteously told her that she could procure the larger type from the manufacturer direct if she selected it.

Thereupon she asked him if the building were properly wired for the heavier voltage of the larger ranges, and he assured her that it was, but that if such a range were used, only certain parts could be utilized in conjunction with the oven. In fact one of the types

which he had there to show, he then explained, could have only one burner and the oven in use at the same time.

Looking at the catalog, my friend saw the voltage specified, and asked him what size of wiring had been used. He was unable to tell her this, but he again assured her that of course this had been provided for, and that she would be safe in buying the range she desired.

Wishing to see the particular type of range she had selected from the catalog, she went to the central station store where the agent had told her these ranges were being demonstrated. After seeing the one she wanted, she definitely decided to purchase it and sign the lease without further delay. But first she asked the demonstrator what kind of wiring it required, and again she was unable to get such information.

Knowing that the manufacturer had a sales office in the city, I suggested that she make enquiry there as to the kind of wiring necessary. I supposed of course they could tell her whether or not the building in question was properly equipped for the larger sizes; although it seemed strange that only the smaller and inexpensive types were being displayed there. She telephoned the sales office of the manufacturer and was told what size of wiring was required for a given range, but they could tell her nothing regarding the apartment building in which their ranges were being shown, and advised her to ask the power company what meter installation had been made.

All of this had taken the better part of a day. To make the telling of a long, trying experience as short as possible, she was in communication with the power company for more than an hour, being referred from one department to another in none too rapid sequence, only to be told at last that if she could give the exact apartment number in the building, in which a meter had already been installed, an inspector would go to that apartment and then they would be able to tell her what size of wiring had been used.

She gave this up in despair, and then telephoned the general contractors of the building, who she had learned were maintaining their own electrical engineering department. Here she was told that she could not use the large range in question—the electric ranges carrying such and such voltage were the only ones possible, and these were the ones which she had seen at the apartment building—those exhibited by the agent at the first call.

The consequence was she gave up all idea of the apartment. She had lost her time and patience, and much of her confidence in the desirability of electric cookery.

She is a woman of wide acquaintance and this story, as frequently told by her since, must have done not a little to counteract in her immediate circle at least, much that was being striven for by expensive advertising.

Cannot some form of coördination be brought about between builders and manufacturers of household conveniences, so that the average woman who has been convinced that she wants to adopt the electric plan in her household, but who naturally is totally ignorant of the technicalities of catalog statements regarding electrical devices, may not be confused, dismayed, and discouraged?

Getting New Business

Electragists Should Cash in on Opportunities Made Through Standard Outlets

Now that practically all manufacturers and dealers have agreed on a standard plug and standard receptacle known as the Double T, there should be considerable replacing of outlets in every locality. Electragists should be quick to seize upon this opportunity for new business.

In a letter to the wiring contractors of Boston, R. S. Hale, chairman of the wiring committee of the National Electric Light Association says:

There are still in use a great number of old fashioned receptacles of various types that will not take the standard plug with parallel blades. In some cases adapters permit the use of these old receptacles but even these adapters are a nuisance. As time goes on these old non standard receptacles will become more and more of a nuisance and people will gradually change over the old fashioned receptacles to standard, just as they changed their old T. H. sockets to Edison sockets.

This situation gives you a chance to get a little extra work. When you put in new receptacles of course you are putting in only standard receptacles. When you do this in a wired house you will find at times old fashioned non-standard receptacles which ought to be changed. Here you may pick up quite a nice little business in total, even though each job may not be very large.

Then very likely you will be able to get orders for putting in new receptacles because there are few houses where

there are really enough receptacles so that the user can use regular lamps, coffee percolator, toaster, vacuum cleaner, fan and portable lamps just as much as he would really like to, and a few extra receptacles put round the baseboard or in the walls are something for which it ought to be easy to get orders.

House Wiring on Time Payment Plan

The field of the New York Contract Purchase Corporation, 120 Broadway, New York, and its associated companies, has been extended to include the purchase of house wiring contracts providing for installation payments. This is limited, however, to installations in which General Electric Company material is used. Such contracts are purchased on the same terms and conditions as those involving the sale of merchandise on installments. Power wiring is not included in this arrangement, but power motors of General Electric Company make are covered.

There are six of these corporations in the United States, as follows:

New York Contract Purchase Corporation, 120 Broadway, New York.

Pennsylvania Contract Purchase Corporation, Witherspoon Building, Philadelphia.

Ohio Contract Purchase Corporation, 1734 Ivanhoe Road, Cleveland.

Illinois Contract Purchase Corporation, 28 East Jackson Boulevard, Chicago.

Southwest Contract Purchase Corporation, Interurban Building, Dallas, Texas.

Pacific Coast Contract Purchase Corporation, 315 Mason Street, San Francisco.

The companies and the products included in the arrangement are: General Electric Company—motors, Tungar rectifiers, compens-arcs and other appliances that are marketed through dealers; Edison Electric Appliance Company—Hotpoint, Edison and Hughes line of appliances, motor driven and otherwise; Electric Vacuum Cleaner Company—Premier, Liberty and other types of vacuum cleaners, including private brands; Hurley Machine Company—Thor line of washing and ironing machines, all types.

These contract purchase companies were organized principally for the purpose of stimulating the sale of the devices manufactured by the affiliated companies mentioned.

•RETAILING•

A Department Devoted to Practical Suggestions that Help to Solve the Problems of Electrical Dealers

Making New Year Build Goodwill For You

BY ERNEST A. DENCH

Little Effort is Made to Attract Trade at This Time, But Due to the Lean Year That Has Passed, Advantages Offered by This Holiday Should be Grasped

The New Year follows so closely on the heels of Christmas that the event is apt to be slighted. Christmas is a busy time for the average merchant, with the result that the week after Christmas is mainly spent in recovering from the effects of it. Little effort is made to attract trade.

But this year has proven a lean one in many respects and the easy going ways of the war years have given way to more aggressive salesmanship efforts. New Year is one of the events that has been sadly neglected, yet it is an event, not so rich in making immediate sales, but more so in the opportunities it presents for the building up of goodwill.

The little niceties of seasonable greetings, the distribution of calenders and other mediums of expressing one's appreciation of custom have been sadly overlooked in the wartime prosperity periods that are no more. To win back such trade—and hold it—is the reason for offering a few successful plans in this connection.

Frank Hull, Chico, Calif., showed a personal interest in his customers by mailing out a little verse of greeting and appreciation. It consisted of a little card no longer than three inches by two inches, which bore the colored illustration of a lighted candle, with a single poinsettia laid at the base. The two articles rested on a column on which the date, 1921, was inscribed. At the side, in dignified type, was the following verse:

We wish to thank you for the patronage you have given us in the past and hope our efforts to please you warrant your trust in us to last.

A. J. Corcoran, New York City, issued a small pocket calender as a business builder. This bore an advertisement of the store. A number of the

calenders were posted on the window glass to form the word, Free. This insured distribution to folks who really wanted a calender, and created sales because few folks had the nerve to go in and ask for a calender without buying something.

The London Store, Brooklyn, N. Y., conducted a New Year Economy Sale, in connection with which special advertising folders were distributed. Each folder contained a calender for the coming year, so that the chances of the calender being thrown away were reduced to a minimum.

The giving of New Year gifts was encouraged in a little poem run by James Berry, Northampton, Mass., in the local newspaper. The poetical effort ran as follows:

*Come in, select your New Year's gifts,
They're here in grand array.
A wonderful selection*

To celebrate the day.

*The prices, too, will suit you,
Just think about the cheer,
When wishing all the loved ones
A prosperous, glad New Year.*

The C. C. Fuller Co., Hartford, Conn., imparted a timely angle to a newspaper advertisement inserted during the last week of December. It suggested:

Turn over a new leaf January 1st. But first turn out the furniture that has served its usefulness.

The same piece of copy can be used by merchants in all lines of business in changing it around to apply to one's particular trade.

Another business stimulator is the special New Year's window display. You arrange them for Hallowe'en, Thanksgiving, Christmas and like festive occasions, so why not New Year's? It was left to the Bon Marche, Seattle,



Show Window Display of the Old Reliable Electric Co., Vancouver, B. C. Note the Pleasing Effect of Overhead Flood Lighting, Using Fixtures of National X-Ray Reflector Company, Chicago

Wash., to make the most effective display that came to my desk last year.

The main feature was a life-size wax doll, dressed as Father Time, with an hour glass slung around its belt. It held a large sycle in the other hand, while one hand was extended toward a large child doll, undressed save for a draped ribbon and a high hat. The ribbon was inscribed with 1921. The center of the draped background was cut out in the form of a large circle, this revealing in the distance a ship that 1921 had just disembarked from. The ship was executed on a piece of painted canvas.

Sales Experiments

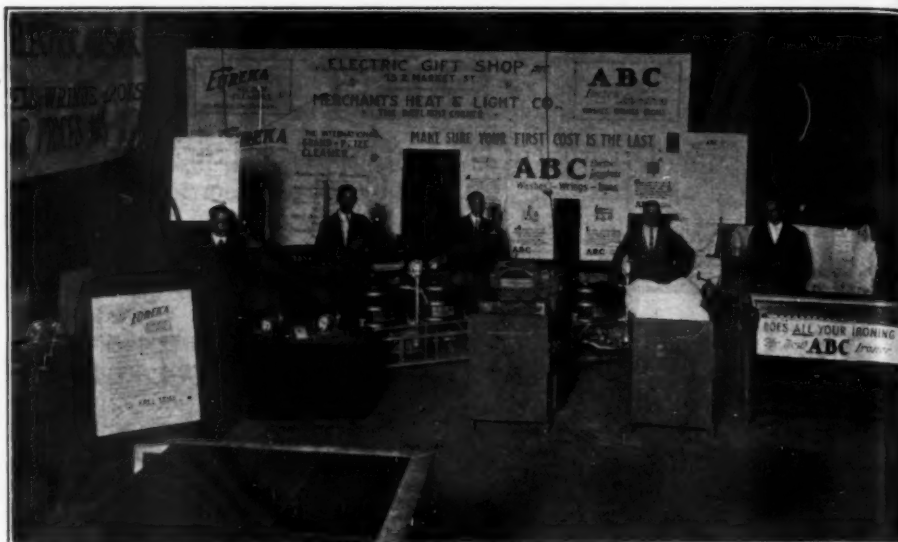
BY EARL BULLOCK

State Fair Exhibits Result in Much New Business and List of Live Prospects Obtained

Two Indianapolis firms recently tried out an experiment in sales, namely, the display of electrical appliances and fixtures at a state fair. The expenses of the experiments were defrayed by the sales organizations and not by the companies whose products they displayed.

In spite of the fact that many companies which displayed at the Indiana state fair reported business slower than in previous years, the two electric firms not only had a good direct sale business, but obtained a list of live prospects that will result in sales later.

The line along which the two firms worked will apply to most states in the union and especially to those states



Through This Complete Display of Devices and Fixtures the Hatfield Electric Company Secured Prospects for Miles Around

that have a network of interurban lines, for these lines make possible electric current to the farm house. The appeal was made mostly to the farm wife, since the majority of persons attending a state fair is the farm element. True there are persons from small towns throughout the state that do not have electric service but virtually all of these towns have electric current including a majority of the farm houses.

In the display of the Electric Gift Shop, nothing was shown but labor savers. Officials of the company say one thing that is absolutely necessary in putting on a display at such a time is to have sufficient salesmen present. There are times during the day when

one or two salesmen would be sufficient, but then there are other times when a much larger force is needed.

The methods of the two organizations were much the same. The appliances were kept in use all the time. This attracted attention that would not have been secured in any other manner, for the public just naturally stops and looks at something moving. The displays were arranged more for actual work than for artistic effect.

In each case, naturally, an attempt was made to make direct sales. Failing in this and knowing the person to be interested, the salesman invariably secured the name and address. This provided a mailing list, which will be followed up regularly. Each company plans to have salesmen call on the prospect at intervals and the direct mail campaign will be used to fill in between these intervals.

The Hatfield Electric Company, in addition to displaying labor saving devices, also showed some fine electric fixtures. More and more the farmer in Indiana is decorating up the farm house and getting away from the old idea that if the barn, cribs, stock pens, fences, etc., were in shipshape, the house could go hang.

Officials of the Hatfield company attribute this largely to the fact that the farm wife is beginning to assert some authority and is demanding a home like her city sisters have. This makes a good field for electric fixtures, in addition to electrical appliances, and the company secured a long list of prospects in surrounding counties where sales are certain to be made.



Salesmen for Electric Gift Shop Kept Things Moving During Indiana State Fair

Reasonable Compensation in Sale of Labor Saving Devices

By R. L. CLIFT

How to Retail Merchandise and Make a Just Profit—Address
Before Tennessee State Association Convention, October 15

In taking up the subject of the sale of appliances in excess of \$50 cost to the retail customer, this matter has been a source of considerable thought to me in the direction of our company on washing machines alone. In a period of less than sixteen months we placed in the homes of our patrons nearly five hundred machine, about 85% of which were sold on the club plan. The major proportion of these machines were retailed at an average selling price of \$172 at a time the factory had established a retail price of \$160 and we found from the first fifty machines which we introduced that the factory price would sow a net loss in advance of sales.

The factories have formulated quite an erroneous idea as to a retailer's profit in the handling of their product, as the major proportion of factories' problems have been solved after finished machines had been delivered to the shipping floor and consigned to a customer. The personnel of factory management seemed totally ignorant of the cost to dispose of their product in a retail way. Our experience would convince us that the proper margin of profit on any device sold on a deferred payment plan would necessarily require a margin as great as the cost of the device f. o. b. the factory. This profit from a factory standpoint completely disappears in practice. The following figures on the washing machine will fully illustrate this point:

Cost f. o. b. factory.....	\$117.50
Carrying Charge.....	19.80
Salesman Commission.....	15.00
Service Cost.....	7.00
Truck Delivery.....	1.50
Freight	3.80
Advertising	2.50
	\$167.10
Sell	\$172.00

You will note from these figures nothing is added for clerical work which is an expense. Had we adopted the manufacturers' suggested resale

price we would show a loss of \$7.10 per machine. Added to this is the further certainty that in a process of any magnitude the accumulation of used machines would in itself amount to at least \$25 per machine. Repossessed, the percentage on this factor will amount to about six machines in each 100 sold.

Together with this, after the most painstaking care and positive instruction to live up to the laws laid down from the office to the sales force, you will find that your sales people in their eagerness to make a sale will promise the customer occasionally other merchandise such as, for instance, a two light plug, which further reduces this margin.

Hence we have arrived at the conclusion that you cannot market a machine costing in excess of \$100 for less than \$200 and show a direct profit. These condition could be greatly improved by a turnover of capital were it possible to sell in each instance for cash. How-

ever, as we all well know, a volume business in sums over \$25 cannot be done for cash.

The next device which would probably attract your attention would in all probability be the dishwasher. I am of the opinion that a practical dishwasher requires a direct connection to sewer, as a rehandling of water both clean and soiled would obviate the advantages and labor saving value of this device.

The feature of water connection and waste water discharge seems to remove this device from the straight electrical line and place it with the combination plumbing and electrical dealer, as the plumbing trade operates under separate city regulations. And the major proportion of electrical dealers recognize in the plumber a master hand for getting the money.

Experienced Marketing

The next device to consider is the vacuum sweeper. The manufacturers



Effective Window Trim of Tri-City Electric Company, Moline, Illinois, Which by the Use of National X-Ray Fixtures the Onlooker's Attention is Drawn to a Central Point in the Display

of this device seem to have a greater experience in marketing this product and have made ample provision for the cost of selling. Portable sweepers, inasmuch as the sale price is within the reach of the average housewife the amount involved permits a volume of business without tying up a great amount of capital. A reclaimed machine can readily be restored to a salable condition which seems freer from requirements of rash promise and of costly trailing charges.

Our experience justifies us in making the statement that we have less trouble in collecting and servicing twenty-five vacuum cleaners than five washing machines. In the first place, the customer

finds it convenient to wait or bring in a vacuum cleaner when a minor adjustment can be made at a trifling cost. Whereas on the washing machine when the good friend housewife has prepared her clothes and washing is in order, should she find a bolt loose or an unfamiliar sound, a defect either fancied or real, she proceeds to ring the phone every ten minutes until a repairman arrives and fixes the machine.

On the large number of washing machines we have sold we are convinced that two telephones will make more fuss and less harmony on Monday morning than the chimes of Westminster. We have noted, however, that the major proportion of complaints subside and in

some cases completely disappear after a period of one year if we have been successful in getting paid in full for a machine in that time, for the reason that the period of the free guarantee contract having elapsed there is no further need for a machine nurse since this will cost money.

In conclusion I would suggest to you that those things for which we put out money and receive naught in return we call experience. Of course, if you get money back you generally class it as an investment. But until the more elaborate household appliances are indexed under new sales conditions I would suggest that you put them under the head of experience.

Make Your Employees More Proud of Your Store

BY FRANK H. WILLIAMS

How to Do It is Explained in This Article
Which Every Proprietor Should Read

When your employees are proud of your store you are sure to do a mighty good business because when the employees take a pride in the establishment where they work they inevitably see to it that the place is always kept looking nice, that they themselves are always neat and attractive in appearance and they also always take a pride in making a favorable impression on all newcomers who enter the store.

But what makes the employees of any store proud of the establishment? What can the employer do to increase this pride among his employees?

In seeking for the answers to these questions, the writer interviewed a number of middle western stores whose employees are noted for being proud of the places in which they work. The things said by these employers can best be summarized in the following interview, putting the words into the mouth of a mythological electrical store proprietor.

One of the very effective methods I use for making my employees feel a strong personal pride in my store and therefore do everything they can to build up the store's business and prestige is to see to it that I get a good amount of publicity about my store in the trade papers to which I subscribe.

Take Pictures

Every six or seven months or so I have a picture taken of the interior of my establishment or of some particular

phase of the business. For instance, just recently I had a picture taken of the old fashioned open fire place I have had put in in which I demonstrate an electric heater. I had the employees line up in front of the fireplace when the picture was taken.

Then I sent this picture to one of the leading trade papers coming to my store with the names of the employees and with a writeup telling about the installation of the fireplace, the effect it had in the way of increasing business, the names of the employees in the picture, and so on. I told the employees what I was doing and of course all of them were much interested and were eager to see the article when it came out.

And when the article did come out I secured enough extra copies of that issue of the paper so that I could give a copy to each of the employees who was in the picture because I knew they would like to show the picture and the writeup to their friends and might possibly want to cut it out so they could preserve it.

Another time I had a picture taken of the main sales room of my store. This main floor has a number of interesting new features which made the picture attractive to the trade papers and I saw to it that all my employees were lined up at the counters as though they were either purchasing or selling goods. Then I gave the names of all the employees and had the picture print-

ed in one of the trade papers to which I subscribe.

Praise Creates Interest

You see the result of getting pictures of the store into the trade papers together with the names of the employees always has a tendency to make the employees take a greater interest in the store and thereby increase their pride in the place. Folks always like to see their pictures published and if their pictures appear in connection with some laudatory words for the thing with which they are connected, their pride is always awakened.

Every time that I have done a stunt of this sort it has had the effect of giving more pep to the employees and making them take much more interest in the store.

Then I use the pictures in another way. I always present copies to the employees free of charge. They quite often take these pictures home and frame them or put them on the mantle or the top of the piano where everyone who calls can see them. This also has the effect of increasing their pride and interest in my establishment.

Then I have additional copies of the pictures framed and put these on the wall of the store in one of the demonstration rooms. Of course all the people who come into this room see the pictures and look at them and comment upon them. I see to it that each picture bears the date on which it was

taken and also carries the names of all the people appearing in the picture. This I find pleases the employes a lot.

Pictures Create Pride

They take a very real interest in talking about the pictures and in seeing me put up new ones from time to time. You see by putting up these pictures it makes it evident that I am proud of my employes and naturally this also works the other way in that it makes my employes quite proud of my store.

The effect too of having my employes photographed in groups in which I also appear has the tendency of making them feel toward each other and toward the store as though we are a family and as though the store is our home. And it is a pretty poor man who doesn't take pride in his own home and in making the place look as nice as possible and in doing things for it from time to time.

Then for the purpose of increasing this feeling that the store is really a home I always see to it that there is a bowling team each year bearing my store's name which is entered in some one of the many bowling leagues which this city has each year. Of course the major number of the members of such a team are always employes of my store, and I also see to it that there are enough really good players on the team to keep it well toward the front and to win the league championship if possible.

You've no idea how it increases the pride of store employes to have something to root for like a winning bowling team. They talk about the team, they work for the team and they do everything possible to make it win. The pride they feel in the accomplishments of the team inevitably makes them feel a greater pride for the store whose name the team bears. And this of course is what I am primarily interested in.

Fosters Athletics

Along the same line as this is my constant effort to do everything possible to foster athletics in the city. Most men are interested in sports. Certainly the majority of all the employes I have ever had in my store have been greatly interested in sports of some sort or other. And so whenever any shop committee comes around asking me to donate something for a track meet, or whenever I am asked to do something to help along the city's sports, I always come across gladly.

I find that while the tangible results

from donations and things of this sort are not very evident, the intangible results are. I can see that it increases the pride of my employes in my store to have me at the forefront in things of this sort. They take pride in working for a man who isn't always howling against sport donations. And they take pride in seeing my store mentioned in the local newspapers at the top of all donors to sports. I feel that this increasing of the pride of my employes in my store is a tremendous thing for the store even if it is rather expensive at times.

These are the main methods I use in increasing the pride of my employes in the place in which they work. These methods have proven mighty successful for a number of years and no doubt will continue to be equally successful in the future.

Isn't there a hint in all this for other electrical merchants?

Armistice Day Illumination at Washington

In the illumination of the city of Washington in honor of Armistice Day and the conference on the limitation of armament, searchlights and floodlights with an aggregate of 4,950,000,000 candlepower were used.

Conspicuous among the features of the illumination was the jeweled portal constructed at the intersection of Seventeenth and B Streets, a gateway of Roman design consisting of two obelisks eighty-five feet high between which was swung a jeweled curtain eighty-six and one-half feet wide. Upon this curtain 37,200 Novagen jewels of various colors were wrought into a scheme of interwoven designs, while the flags and the coats of arms of the visiting nations participating in the conference comprised a great sunburst in the center of the curtain. The illumination of the curtain at night was effected by thirty 18-inch arc searchlights in batteries of fifteen each, supplemented by six 60-inch open type army searchlights operated by Cadillac generating equipment.

Leading to this jeweled portal was the Avenue of Light, the street beting illuminated for four blocks by rows of four-burner Roman lamps on both sides of the street, with flaring torchlike flames. Illuminating gas was used to produce this effect although most of the display was accomplished by the use of electricity.

For the Light of the States, a representation of the Aurora Borealis, located in front of the Congressional Library, twenty-four 24-inch searchlights were used, the combined beam candlepower being 1,920,000,000.

Sixteen heraldic banner stands were placed in front of the Pan-American building and other buildings, the fronts and porticos of the structures were lighted with rose tinted lights, and the flags were floodlighted. The Washington Monument was lighted by four batteries of 18-inch searchlights located at its base, and sixteen 18-inch arc searchlights installed on its top played streams of light on various buildings.

Life says that every normal man has two great ambitions. First, to own his home. Second, to own a car to get away from his home.

One death in every six of insured wage earners is due to tuberculosis.

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACT OF CONGRESS OF AUGUST, 24, 1912, OF ELECTRICAL CONTRACTOR-DEALER, published monthly at Utica, N. Y., for October 1, 1921.

STATE OF NEW YORK,
County of New York, } ss.

Before me, a Notary Public in and for the State and County aforesaid, personally appeared Farquson Johnson, who, having been duly sworn according to law, deposes and says that he is the General Manager of the ELECTRICAL CONTRACTOR-DEALER, and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 443, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are:

Publisher, National Association of Electrical Contractors and Dealers, 15 W. 37th Street, New York, N. Y.

Editor, Farquson Johnson, 15 W. 37th Street, New York, N. Y.

Managing Editor, none.

Business Manager, Farquson Johnson, 15 W. 37th Street, New York, N. Y.

2. That the owners are:

The National Association of Electrical Contractors and Dealers. Not incorporated. Composed of 2200 members, of whom principal officers are:

James R. Strong, Chairman, 526 W. 34th Street, New York, N. Y.

Farquson Johnson, Secretary-Treasurer, 15 W. 37th Street, New York, N. Y.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are none.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the Company, but also, in cases where the stockholder or security holder appears upon the books of the Company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

(Signature of) FARQUSON JOHNSON,
General Manager.

Sworn to and subscribed before me this 26 day of September, 1921.

LILLIAN V. DRISCOLL.
(My commission expires April 19, 1923.)

Dust the Bane of the Housewife--How to Get Rid of It

Let's Know as Much About This Evil as We Do About the Devices We Use to Deal With It—Our Sales Will Increase

We who deal in electric cleaners praise them to the housewife as a means of keeping her house free from dust. We assume to know a great deal about cleansers—but how much do we know about dust?

The great count against dust is on the score of health. The fine, bacteria-laden particles, when inhaled may be the cause of any number of diseases, and it so happens that the danger is much greater indoors than out-of-doors.

The air in high mountainous sections, on deserts, and on the sea, is practically free from bacteria; in large cities, on the other hand, these organisms, swarm. They are so very minute that it is hard to conceive what they are like. Many of them are not more than 1/150,000th of an inch in diameter. They reproduce by the simple method of dividing into two equal parts, and under favorable conditions they multiply at an enormous rate.

It has been calculated that one germ dividing once every hour, would at the end of twenty-four hours have increased to seventeen millions if nothing interfered with the food supply. Fortunately for us, nature in various ways renders such extremely rapid growth impossible, but just the same, it behooves us to avoid conditions favorable to their increase.

Bacteria Dangerous

Many of these bacteria are harmless, but a few species are very dangerous, tuberculosis being the most serious disease which they transmit. The irritation produced by the small dust particles in the throat and lungs is also responsible for coughs and catarrhs.

The out of doors air, even in large cities, is not so dangerous because it is constantly purified by the sweep of great wind currents. Here and there along city streets which have not been properly cleaned, one may encounter in a sudden eddy of wind, what one writer has called "germ showers," but this is the exception rather than the rule out-of-doors.

Indoors, the story is different. The bacteria of dust are very likely to be in groups or clusters, and so most of them readily settle. If a room is left undisturbed, the air will almost entirely free itself of micro-organisms within two or three hours, the heavy dust having found its way to floor and furniture. But let anyone come in and move about, and the bacteria are once more circulating about in the air.

And there is no wind to purify it. T. M. Prudden in his volume on "Dust and Its Dangers," says, "Ordinary rooms, even though they be well ventilated, are actually dust and bacteria repositories."

It is obvious that sweeping only makes things worse. Dr. Prudden describes tests carried on in the Boston

City Hospital which showed that the air was most pure at night, when no one was moving about, and that the general cleaning and sweeping routine was capable of increasing the number of germs on the average seventy times. It was found that sweeping nearly doubled the number of bacteria already in the air after it had been disturbed by the other work of the morning.

In a similar experiment in a New York hospital, a dish containing nutrient gelatin on which the germs might thrive, was placed in a most carefully kept ward in which there were about twenty-five persons. Before the sweeping, the number of germs which settled onto the dish, three and three-fourths inches in diameter, was twelve. Imme-



Upholstered Furniture Was an Inevitable Harboring Place for Bacteria Before Electric Suction Solved the Problem

diately after sweeping the number of germs which settled onto a similar surface was two hundred and twenty-six.

Dusting Futile

"It is obvious," states Dr. Prudden, "that unless the windows be widely open or liberal air currents in some way established, the too common method of so-called 'dusting'—that is, the stirring up of the dust which has settled on the smooth places in a room so as to allow it to settle again onto the rough surfaces or inconspicuous places where it does not show—is worse than useless, since the dust and germs are not in this way got rid of, but only redistributed and put for a time in a situation suitable for inhalation."

Out of doors the wind does the cleaning, with occasional assistance from the rain. Indoors, liberal air currents are needed, state the authorities—and the electric vacuum cleaner supplies those. Dust and disease seem inseparable. The cleaner, in eliminating dust from the house, goes a long way towards safeguarding the family health.

All of which is good medicine when it comes to selling. I saw a young salesman use it to advantage in a clever way not long ago.

He pointed out to the housewife that with electricity, cleaning is practically dustless, and therefore far more sanitary than the old methods. Not only are the clouds of dust which the broom raised eliminated now, but the old style, insanitary dusting is also done away with.

Vacuum Cleaner Effective

"Formerly, at our house," he said, "we swept and stirred up a great deal of dust, let it settle on the furniture, and then went around with a cloth, wiping it off onto the floor again. Now, with our electric cleaner, my mother does the dusting first, and then she takes out the cleaner and its attachments and sucks up all the dust in the room. It's really wonderful how the attachments remove all soil from the upholstered furniture and the drapes. And it's such a satisfaction to have all the dust actually taken out of the room."

I pricked up my ears at this, and continued to listen in. He dropped a few hints about the large amount of dust and accompanying disease germs found in cities. I heard him say that a single cubic inch of air sometimes

contains a million and a half minute particles—and the sale was made.

He might have made more use of the facts about bacteria, but he was certainly on the right track. The good housewife has always been famous for her aversion to dust; she doesn't need to be told that it is dangerous, but she is impressed when anyone can give her specific scientific facts along this line.

It does not do, of course, to enter upon a long dissertation, but a few details, given off-hand at the right time, have their effect. The salesman's point about the new method of dusting is an excellent introduction to some of this data. For dust and dusting are matters of importance not only to the housewife, but also to those of us who want to sell cleaners.

An Unsolved Mystery

From a recent number of Nelectra-Grams, a bulletin issued by the Newark Electrical Supply Co., of Newark, N. J., is quoted the following:

It is strange that the average electragist seems to rejoice, every time he can place an order with a fellow who is located in some distant city, and the farther away the city is the greater the rejoicing.

Forgotten are friendships, forgotten the fact that the local man works the hardest to improve local conditions, forgotten the fact that the dollar spent at home in the long runs gets more than a dollar and a half spent in some other city, and forgotten the fact that the nearer home you buy, the less money you need to invest in stock on hand.



Nowadays Dusting Comes First on Cleaning Day Instead of Last as Formerly, and an Important Item of the New Style Dusting Consists in Blowing Stray Particles From the Radiator With a Cleaner Attachment



ORGANIZATION ACTIVITIES

A Department Devoted to the Reports of State and Local Meetings



STATE CHAIRMEN AND SECRETARIES

State	Chairman	Secretary	State	Chairman	Secretary
ONTARIO, CANADA:	K. A. McIntyre, 24 Adelaide St., W. Toronto	J. A. McKay, 24 Adelaide St., W. Toronto	MARYLAND:	S. C. Blumenthal, 505 N. Eutaw St., Baltimore	C. Philip Pitt, 15 E. Fayette St., Baltimore
BRITISH COLUMBIA:	W. W. Fraser, 714 Hastings St. W., Vancouver	J. C. Reston, 411 Howe St., Vancouver	MASSACHUSETTS:	Geo. B. Quinby, Boston	J. E. Wilson, 263 Summer St., Boston
COLORADO:	J. Fischer, 213 15th St., Denver	W. A. J. Guscott, 715 18th St., Denver	MICHIGAN:	Henry Roseberry, 41 Pearl St., Grand Rapids	H. J. Shaw, 613 Lincoln Bldg., Detroit
CONNECTICUT:	E. S. Francis, 272 Asylum St., Hartford	Geo. M. Chapman, 43 E. Main St., Waterbury	MINNESOTA:	Emil Anderson, 240 Plymouth Bldg., Minneapolis	Arthur P. Peterson, 2395 University Av., St. Paul
DISTRICT OF COL.	Frank T. Shull, Conduit Rd. and Elliott St. Washington	H. R. Harper, 635 D St., N. W., Washington	MISSOURI:	W. J. Squire, Kansas City	A. J. Burns, 533 Delaware St., Kansas City
FLORIDA:	T. E. Satchwell, Jacksonville	J. G. Spencer, Palatka	NEW JERSEY:	Geo. E. Davis, 23 Central Ave., Newark	Elmer D. Wilson, Newark
GEORGIA:	Henry Morton, 1227 Broad St., Columbus	C. B. Anderson, Walker El. & Plain. Co., Columbus	NEW YORK:	F. A. Mott, 29 St. Paul St., Rochester	J. P. Ryan, 26 Cortlandt St., New York City
INDIANA:	A. B. Harris, Gary	A. I. Clifford, 507 Odd Fellows Building, Indianapolis	OHIO:	C. L. Wall, 212 S. Main St., Akron	Walter R. Keefer, 939 E. McMillan St., Cincinnati
IOWA:	Louis L. Corry, 510 Brady St., Davenport	Arthur Tucker, 619 Jackson St., Topeka	PENNSYLVANIA:	R. W. Keck, Allentown	M. G. Sellers, 1518 Sansom St., Philadelphia
KANSAS:	C. S. Smallwood, 1017 N. 5th St., Kansas City	336 Camp St., New Orleans	TENNESSEE:	P. W. Curtis, Chattanooga	J. A. Fowler, 10 S. Second St., Memphis
LOUISIANA:	C. S. Barnes, 513 Gravier St., New Orleans		WISCONSIN:	B. L. Burdick, 72 Water St., Milwaukee	H. M. Northrup, 25 Erie St., Milwaukee

LIST OF LOCAL ASSOCIATIONS AND MEETINGS

State and City	Local Secretary	Street Address	Time of Meet.	Place of Meet.	State and City	Local Secretary	Street Address	Time of Meet.	Place of Meet.
ALABAMA					NEW JERSEY				
Birmingham			Mon. Noon	Hillman Hotel	Atlantic City	F. P. Wright	16 Ohio Ave.	1st Thursday	Malatesta Hotel
Mobile	E. J. Hueguenot		Fri. 5:30 p. m.	Members' Offices	Jersey City	Wm. Doellner	743 Bergen Ave.	1st Monday	P. S. Bldg.
CALIFORNIA					Newark	Geo. E. Davis	23 Central Ave.	Last Friday	P. S. Bldg.
Berkley	J. M. Gregory	Pacific Bldg.	Fri. 8 p. m.	Pacific Bldg.	Pateron	H. M. Desaix	88 Ellison St.		
Covina	F. Rambo		1st & 3rd Mon.	Ontario	New York				
Long Beach	O. W. Newcomb	308 E. 4th St.	Tues. Ev'g.	Spaulding's	Albany	E. A. Jones	31 Hudson Ave.	1st Thursday	Pekin Rest'nt
Los Angeles	Irvin C. Brusa	118 E. 3d St.			Binghamton	A. H. Hyle			
Oakland	J. Gregory	Pacific Bldg.	Tues. 8 p. m.	Pacific Bldg.	Brooklyn	H. W. Walcott	12 Nevins St.	1st Mon.	Cham. Com.
San Francisco	A. Elpins	165 Jessie St.	Wed. 1:30 p. m.	165 Jessie St.	Buffalo	E. P. McCormick	555 Wash. St.	Fridays	507 Elec. Bldg.
Van Nuys	Los Angeles Assn		Tues. 6:30 p. m.	Pin Ton Cafe	Cooperstown	B. B. St. John	Oneonta	3d Tues.	Vanon
COLORADO					Endicott	A. H. Hyle	Binghamton	Tues.	Cham. Com.
Denver	L. B. Roberts	227 Coronado Bldg.	2d & 4th Tues.	227 Coronado Bldg.	Jameson	Henry Lund	309 Main St.	3d Mon.	Mfgs. Ass'n.
CONNECTICUT					Kingston	M. C. Rivenberg			
Hartford	H. D. Hitchcock	45 Preston St.	Call of Sec'y	118 Asylum St.	Nassau-Suffolk	J. A. Palmer	Huntington		
New Britain	F. Mulvehill		Monthly	192 Grand St.	New Brighton	E. L. Taylor	Tottenville		
Waterbury	A. S. Jordan	Conn. Lt. & P.Co.			N. Y. Sec. No. 1	J. P. Ryan	26 Cortlandt St.	1st Thurs.	Penn's Hotel
DIST. COL.					Independent	John Perass	22 New Chambers	2d & 4th Wed.	226 W. 58th St.
Washington			2d Thurs. ea mo., 8 p. m.	Dewey Hotel	Sec. No. 3	L. F. Lwedecke			
FLORIDA					Oneonta	B. B. St. John		3d Thursday	Builders' Exch.
Jacksonville	W. L. Joseph	155 E. Forsyth	1st Tuesday	208 Realty Bldg.	Rochester	Theo. Benz	State St.	Mon. 6:15	
Miami	C. E. Pullen	Pullen-Zoll Co.			Schenectady	Mr. Spengler	McClellan St.	Subject to call	
ILLINOIS					Syracuse	H. N. Smith	P. O. Box 809	1st & 3d Monday	
E. Moline	E. J. Burns	Rock Island			Troy	H. W. Boudey	First St.	1st Tues.	Gas Office
Chicago	J. W. Collins	179 W. Washington St.	2nd & 4th Wednesday		Utica	Mr. Hall	Gray Elec. Co.	Monthly	Elks' Club
E. St. Louis	O. J. Birmette		Sat. 2 P.M.	Arcade Bldg.	Westchester	I. W. Austin	White Plains		
La Salle	Ed. Blaine		1st & 2nd Tues.	Post Hall	Watertown	L. B. Smith	Roth Block	3d Fridays	Utilities Bldg.
Rock Island	E. J. Burns	219 18th St.	1st & 3rd Mon.	219 18th St.	Woodmere	Geo. La Salle	Westbury	Monthly	
Streator	Wm. Schroder	613 Tyler St.			Yonkers	Mr. Mayer	Manor House Sq		
INDIANA					Ontio				
Evansville	C. E. Jett		Wed. noon	Y. M. C. A.	Akron	L. C. Wall	12 S. High St.		Elec. Co.
Gary	A. B. Harris	570 Washington			Cincinnati	W. R. Keefer	939 E. McMillan	Tues. 3 P. M.	Cham. of Com.
Indianapolis	G. L. Skillman	29 S. Capitol Ave.	1st & 3rd Thursday	Commercial Club	Cleveland	Geo. D. Biery	E. 95th St.	1st & 3d Thurs.	Builders' Exch.
Watsaw	F. E. Strauss	120 W. Market St	Wed. Ev'g.		Columbus	O. A. Robins	Erner Hopkins	2d Wed.	Builders' Exch.
IOWA					Springfield	J. R. Yost		2d & 4th Fri.	Nat. Ex. Bank
Davenport	E. Burns	Rock Island	2d & 4th Mon.	Rock Island	Steubenville	D. C. Hartford		1st Wed.	New China Res.
Waterloo	H. L. Hileman	600 Bluff St.			Youngstown	F. F. McBride	Builders Exch.	Mon. 6 P.M.	
KANSAS					OREGON				
Topeka	H. S. Lee	816 Kansas Ave.	Mon. Noon	Elk's Club	Portland	F. R. Whittlesey	212 Henry Bldg.	2d & 4th Monday	Cham. of Com.
KENTUCKY					PENNSYLVANIA				
Paducah	W. R. Kitterjohn		Last Thurs.		Allentown	A. Hill	Bethlehem	Monthly	
LOUISIANA					Bethlehem	A. H. Hill	510 W. Main St.		
New Orleans	R. S. Stearnes	336 Camp St.	1st Weds.	Teocalli Hall	Catsauqua	W. T. Kleppinger		Last Thursday	
MAINE					Dubois	C. E. Blakeslee		Monthly	
Portland	H. T. Boothby	222 Middle St.	1st Mon.		Easton	G. E. Hill	Bethlehem	Monthly	
MARYLAND					Erie	Earl Stokes	Bldrs. Exch.		Bldrs. Exch.
Baltimore	C. P. Pitt	15 E. Fayette	1st & 2d Tues.	Elk's Club	Lancaster	A. Deen	1518 Sansom St.	3rd Friday	Und'w'r's Office
MASSACHUSETTS					Philadelphia	M. G. Sellers	10 N. Diamond	2nd Thurs.	Builders' Exch.
Boston	J. E. Wilson	263 Summer St.	3d Thurs.	Boston City Club	Pittsburgh	Geo. Burrows	Bd. of Tr. Bldg.	Tues.	Zenke's
Fitchburg	R. M. Gowell		1st Mon.	Fay Club	Scranton	A. J. Fowler	Dubois	Mon.	
Haverhill	H. W. Porter	24 West St.	2d Mon.	El. Lt. Sta.	St. Marys	C. E. Blakeslee	E. King St.	2d & 4th Tues.	
Worcester	L. H. Treadwell	681 Main St.	2d Thurs.	44 Front St.	SOUTH CAROLINA				
MICHIGAN					Columbia	E. L. Cashion	Sumter, S. C.		
Detroit	H. Shaw	613 Lincoln Bldg	Last Thurs.	G. A. R. Hall	Greenville	E. C. DeBruhl	Ideal Elec.		
Flint	J. Markle	718 S. Saginaw			TENNESSEE				
Grand Rapids	M. Randall	Exch. Place	Tues. Noon	Ass'n of Com. Cham. Com.	Chattanooga	Carl Schneider	412 Kirby Av.	Wednesday	Manhattan Cafe
Kalamazoo					Knoxville	H. M. Moses	615 Market St.	Noons	Rwy. Lt. Co.
MINNESOTA					Memphis	H. A. Street	285 Madison Av.	Monthly	Allyn Cafe
Duluth	Alfred L. Foster	210 W. 1st St.	1st Tuesday		Nashville	J. B. Mullen	Arcade	1st & 3d Wed.	Tularie Hotel
Minneapolis	A. P. Peterson	2395 University Ave., St. Paul	2d & 4th Tues.	Builders' Exch.	TEXAS				
St. Paul	A. P. Peterson	2395 Univer. Av.	2d & 4th Mon. 6:30 P. M.	Elk's Club	Dallas	P. B. Seastrunk	Lepacombe Elec. Co.	Wed. 8 P.M.	1805 Main St.
MISSOURI					VIRGINIA				
Kansas City	Mr. Brown	809 Delaware	Tues. Evenings	University Club	Norfolk	K. D. Briggs	Arcade Bldg.	Wednesdays	Old Col. Clb.
St. Louis	F. Lyle	Wainwright Bldg.	Wed. Evening	Am. Hotel	Richmond	W. A. Cutlett	Jeff. & Grace Sts		
NEBRASKA					WASHINGTON				
Omaha	T. Mustain	315 Neville St.			Seattle	T. C. Smith			
NEW HAMPSHIRE					WISCONSIN				
Portsmouth	F. C. Hatch	Kittery	2d & 4th Wed.		Milwaukee	Henry C. Hutton	719 Majestic Bld.	2nd Tuesday	Maryland Hotel
					CANADA				
					Toronto	J. A. McKay	110 Church St.	2d Tues.	Bd. of Trade
					Vancouver	J. C. Reston	411 Howe St.		724 Pacific Bldg.

Associations can secure listings here by sending necessary data to the National office

Enthusiastic Meeting of the Rhode Island Electrical League

Get Together Gathering Held at Providence, November 2, Was Most Successful of Any Held in the State—Samuel Adams Chase Was the Principal Speaker

A most successful meeting of the Rhode Island Electrical League at Providence, R. I., was held during the evening of November 2nd, and was one of the most enthusiastic get together meetings ever held in that state.

There were approximately one hundred and twenty-five in attendance at this meeting including representatives of manufacturers, jobbers, central stations and contractor-dealers throughout the state, including representatives of a large percentage of the Rhode Island central stations. Amongst others in attendance and taking an active part were the officials of the Narragansett Light Company of Providence; several officials and other representatives of the Blackstone Gas & Electric Company of Woonsocket and Providence districts, including E. L. Milliken, general manager, who acted as chairman and toastmaster of the meeting; F. D. Lisle, president, and Edward P. Gosling, general manager of the Newport Electric Corp., Newport, R. I.

The various officials of the Rhode Island Electrical League headed by M. Frank Falk, president, were in attendance at this meeting in full force and a wonderfully united, and enthusiastic spirit was shown throughout the business session which preceded the principal address of the evening.

They were all united and very enthusiastic in regard to holding an electrical show during the week of January 9th in the city of Providence and will also hold similar shows in the cities of Pawtucket and Woonsocket, the dates of which are to be announced later.

The league has been carrying on an extensive coöperative advertising campaign to educate the house owner and tenant to the use of electricity and has planned a campaign for the holidays when Christmas gifts will be used to promote enthusiasm and sales results. The league is also planning to erect a modern electrical home as soon as a suitable site is secured. Definite committees were appointed to arrange for coöperative advertising and sales campaigns to promote better wiring, con-

venience outlets, modern homes electrical and a house to house canvass for the sale of electrical appliances.

Samuel Adams Chase was the speaker of the evening and his subject was Harmonizing the Industry. He spoke briefly on the difficulties experienced in the past in following the slogans of Live and Help Live and Coöperative Competition, but said these difficulties no longer exist except in a few places where they will not learn the lesson of Live and Help Live.

Mr. Chase described the results of Harmonizing the Industry stating that instead of following a plan of destructive competition the industry was now thinking of other things, the result of which was a more profitable business, more profitable relationship and harmony in the industry and increasing merchandising business with better stores, better window displays, better business men. Meantime as a result of this work there has been a great improvement in the credit risk of contractor-dealers as a whole.

When asked what one should expect to benefit or get out of this work of coöperative advertising, sales campaigns and other association work, Mr. Chase answered: "Living is giving, all life is an interchange, you get back only what you have given. Business in the last analysis is service, and service is only another name for giving."

Mr. Chase criticized some of the get together meetings which have been held in the past and called attention to the fact that many of these meetings did not produce any definite results; that about all that was accomplished was to have a good dinner, a few talks and a good time generally, but nothing of a definite character to follow up in a business way and that nowadays we don't even have a headache the same as we used to have.

In other words we do not always profit from the enthusiasm expressed during the meetings and devise ways and means for taking advantage of the opportunities presented. No get together meeting should be complete un-

less it ends with definite and well planned coöperative advertising and sales campaigns arranged for and committees formed to carry out the details.

Charts were used during the address to illustrate coöperative advertising, modern homes electrical, and various sales campaigns and organization work which is being done so successfully at Cleveland and other cities in the United States as well as in Canada.

Answering a question from the audience "Should central stations conduct a merchandising business?" Mr. Chase replied:

Central stations have been pioneers in the sale of and distribution of incandescent lamps and that channel was marked with beacons of free renewals and cut prices, alluring the industry not to a haven of safety but to a rock bound coast of disaster.

Now the channel has changed to the jobber, contractor-dealer and central station, with the percentage clearly marked with beacons of ethical merchandising and intensive selling, producing absolute fairness in competition between the competing groups—and the contractor-dealer with a well located attractive retail store now plays an important part in the channel of distribution of lamps from the manufacturer to the consumer.

The flat iron, washing machine and vacuum cleaner and other household appliances were introduced principally by the central station who did the pioneer work on these appliances as well as on incandescent lamps, and it is my belief that the central station on account of its organization, prestige, financial responsibility and desire to add kilowatts to its lines, will always be the logical pioneer and pilot the way for the jobber and contractor-dealer on household current consuming devices, and it would be very unfortunate to the manufacturer and to the consumer if the central station should go out of the retail business properly conducted on an ethical basis and most central stations will always carry the introductory or development expense of placing new current

consuming devices on the market. It is therefore up to the contractor-dealer to coöperate and take full advantage of the demand created.

Mr. Chase mentioned among other suggestions that we should all take an inventory of the wiring and merchandising situation in each local territory and prepare a chart showing the exact situation at the present time and provide columns for a yearly comparative summary in the chart so as to show annually the gain, and to head this chart with a slogan Watch it Grow. This inventory should include a house to house canvass on better wiring, convenience outlets and electrical appliances in use. This data should be tabulated and total summary prepared of each local situation from the information secured in this way.

Mr. Chase made the assertion that not one house in ten thousand is properly wired with sufficient baseboard or floor convenience outlets to make it handy for the housewife to use electrical appliances. To illustrate this statement he made use of a chart of a dining room scene where connection was made between the coffee percolator and toaster on the dining room table with the chandelier over the table, and called this up-to-date wiring for the reason that 90 percent of the present homes necessitate the housewife going to the trouble of climbing on a chair in order to make the necessary connections to use these electrical appliances. This is the condition of many new apartments and other residences.

If only one convenience outlet and one electrical appliance was added to

every wired home in the United States, it would bring into the electrical industry approximately 300,000,000 such outlets besides the additional current consumed. Mr. Chase stated that this is a very important matter to the industry and it is up to all of us to correct the situation. For the average housewife will use electric appliances simply for ornaments on the sideboard unless we make it handy and easy for her to use them by supplying an adequate number of convenience outlets.

Cost Data Meetings

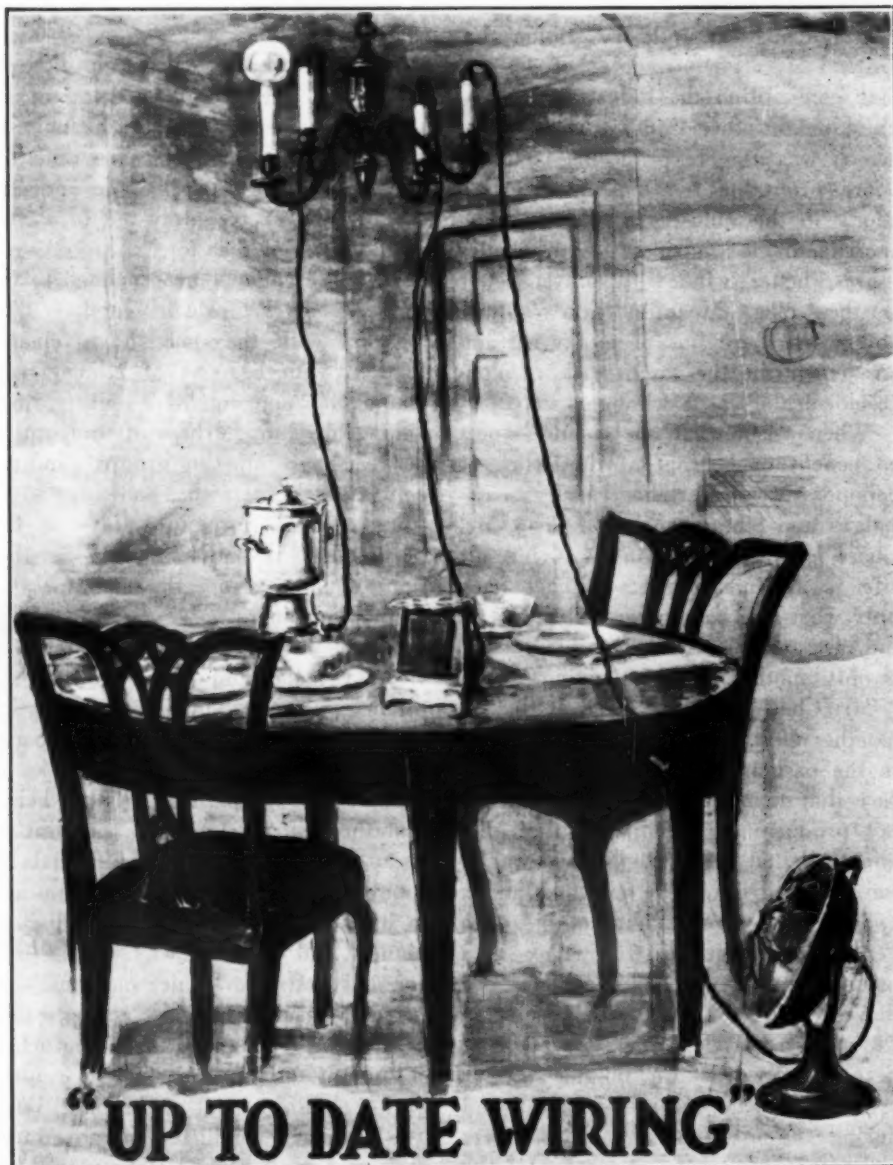
Chairman Abbott and His Committee Visit Chicago and New York City

Beyond all doubt the Chicago Electrical Estimators' Association is the acknowledged pioneer in the field of figure finding in the contractor-dealer branch of the electrical industry. To those Chicago men who have so faithfully worked toward the upbuilding of systematic estimating must go the credit for the present activities along these lines throughout the United States and Canada; and their accomplishments are just beginning to bear fruit.

More than two years ago in these pages were presented the results of the work of Albert Uhl and E. L. Morley of the Chicago organization, which fully set forth facts and figures that had been arrived at through careful study and long experience. The forms shown had been used with success by Chicago members and were recommended for adoption by other estimators.

Up to a few years ago but little attention was given to this most important feature of electrical contracting—estimating. Individual efforts were showing profitable results, as in the cases of A. L. Abbott of St. Paul, Harry C. Turnock of Cleveland, and others, as well as those who were working out such problems in Chicago. But not until an association was formed in the latter city was any successful organized effort made.

Last year, however, Mr. Abbott was given the chairmanship of the Code Committee by the executive board of the National Association of Electrical Contractors and Dealers. For years he had been working on a unique method of estimating, and this system was given publicity in these columns a year ago. It created so much comment and discussion that a renewed interest was aroused throughout the entire country. At that time the Electrical Estimators' Association of Greater New York became in-



One of the Charts Used by Mr. Chase in His Talks on Proper Wiring. As Mr. Chase Says, This is not a Joke But an Actual Scene in Almost any Dining Room That Has "Up to date Wiring"

terested in this new method and it was studied and discussed by that organization.

Mr. Abbott continued to revise and improve his method until such time as he had it in shape for official presentation. He then called together his committee, consisting of Harry C. Turnock of Cleveland, and Kenneth A. McIntyre of Toronto, and arranged to meet with the Chicago and New York organizations for the purpose of explaining it.

Upon meeting with the latter the committee found that whatever opposition existed seemed to arise from a misinterpretation or a misapplication of his methods. After he had explained every point in detail, the members entered into an interesting discussion of its merits, and the committee was kept busy answering questions.

Such able and experienced estimators as Cambell Higgins, president of the New York organization, W. R. Monteser, M. P. Brown, A. Greenblatt, secretary of the association, and others, explained their own methods and offered them in comparison with those of Mr. Abbott and his committee; but finally it was agreed that what was termed the "Abbott Method" more nearly fitted the present needs and requirements.

The Estimators' Association of Greater New York then went on record as approving this new system, unanimously passing a resolution of endorsement, which included a vote of thanks to the National Cost Data Committee for presenting its report.

At Chicago, in October, Mr. Abbott and his committee found practically the same opposition that had been encountered before, due largely to a misunderstanding. Naturally the Chicago fellows are justly jealous of their own methods, which not only led up to the present activities, but which are considered satisfactory to them. They were not familiar with the new system and were in no way prepared to consider anything but their own. However, at a general meeting of the organization the visiting committee informed them that there would be no attempt to force them into adopting the new method. The principal object of the visit of the Cost Data Committee was to explain to the Chicago Electrical Estimators' Association the details of the new system and then to compare it with other methods.

As Mr. Abbott said: "It is not that we do not see the good in other systems, but we believe that other investigators along this line have missed the point

that one of the chief purposes of a standardized estimating system is the education of the smaller contractor who is at present ignorant of any of the good practices of estimating; and we feel that our system does at least to a certain extent crystallize in definite form the results of the experience of the skilled estimator and thus makes this experience available for the guidance of the beginner."

The results of the committee's visits both to Chicago and New York were most gratifying. They brought forth discussions that are beneficial to all concerned. They also cleared up misunderstandings and went far toward creating a spirit of coöperation that should result in the Chicago and New York organizations getting together on the many mooted questions that prevail in the field of estimating.

It is understood that Mr. Abbott will visit Chicago again some time this month, or after those of the interested members of the Chicago organization have had time to study the new method. In the meantime the Chicago Electrical Estimators' Association will nominate one of its members for appointment on Mr. Abbott's committee.

Election of Executive Committeemen

The canvass of the mail ballot for the election of the National Association Executive Committeemen for the various divisions was made by a committee consisting of Jas. R. Strong, National Chairman, and Paul H. Jaehnig.

The vote resulted in the election of the following committeemen for the various divisions who take office on January 1, 1922, for a period of two years:

- Atlantic Division
 - W. Creighton Peet of New York City.
 - A. J. Hixon of Boston, Mass.
 - E. C. Gramm of Washington, D. C.
- Central Division
 - G. M. Sanborn of Indianapolis, Indiana.
 - J. A. Fowler of Memphis, Tenn.
 - J. E. Sweeney of Waterloo, Iowa.
- Canadian Division
 - K. A. McIntyre of Toronto, Canada.
- Pacific Division
 - E. H. Eardley of Salt Lake City, Utah.

Several of the ballots from the Atlantic and Central divisions were declared void because of members voting for six candidates instead of three as was specified on the ballots. Some few members also enclosed the wrong envelope or failed to follow the simple directions given for balloting.

Taken altogether, however, the new

method of electing National Executive Committeemen is considered quite satisfactory. Too few members avail themselves of the opportunity of voting, but this objection cannot be overcome, and it is the general rule in any method of nominating and electing officers.

The outstanding feature of the present method is that it is absolutely a secret ballot when members follow the rules as laid down in the National Constitution, and when these methods are not strictly adhered to the ballots cannot be counted.

Another Code Question

In another column is printed a dispassionate argument on the omission of the fuse in a grounded conductor, by H. S. Wynkoop, author of "The Code at a Glance." Learning that this paper was in existence—having been prepared for presentation in an entirely different quarter—Mr. Wynkoop was prevailed upon to release it to the NATIONAL ELECTRAGIST, having been persuaded that electragists are the very persons who need most to gain intimate acquaintance with the pros and cons underlying the National Electrical Code.

If electragists do not habituate themselves to a constant study of these matters, they cannot complain if others make the Code for them, or if those authorities who finally determine the Code listen only with tolerant half interest to ill considered suggestions for amendments emanating from the National Association.

Annual Michigan Meeting

State Association Has Successful Gathering at Grand Rapids

On October 20 the Michigan State Association held its annual meeting in the Pantlind Hotel, Grand Rapids. Nearly one hundred were in attendance when the address of welcome was made by Chairman Henry A. Roseberry.

After the business session, H. Shaw, secretary of the state and also the Detroit local associations, gave a talk on the "Benefits and Importance of Local Clubs"—printed on another page of this issue.

A. G. Ofenstein, a member of the Electrical Estimators' Club of Detroit, then addressed the meeting on "Estimating and How It Should Be Done." This was very interesting and instructive and was said to be the most complete and thorough treatment of the

subject ever given before an audience in the state of Michigan. Mr. Ofenstein has spent a lifetime in the electrical estimating profession and is a student of this work.

At seven p. m. a banquet was held, after which the meeting reconvened in the Rotary Club room of the hotel where the entertainment committee had prepared for a very interesting and enjoyable program. A song master and pianist were provided and all joined in singing a number of popular songs. This had the effect of livening up the crowd and putting them in a frame of mind to receive C. J. Litscher's talk with enthusiasm.

The subject of of Mr. Litscher's talk was "The Electrical Contractor-Dealer and His Opportunities as Viewed by the Jobber," and in handling this subject Mr. Litscher plainly showed that he knew all the angles of the jobbing business in its relation to the contractor-dealer. The outstanding feature of Mr. Litscher's talk was the offer to the Grand Rapids contractors to abandon the sale of electrical material to industrial plants on the condition that the Grand Rapids contractors would equip and prepare themselves to take over this business. He explained that it would be possible for the Grand Rapids contractors to take over his industrial business on the same price basis as he is now selling these plants and make a profit for themselves in so doing. This talk was received with a great deal of enthusiasm and applause.

Mr. Schwenk, representing the Western Electric Company, took the floor after Mr. Litscher's talk and said that his company would be very glad to follow this same plans as the Litscher Electric Company under the same conditions.

J. K. Swanson of the Consumers' Power Company read a very interesting paper on "What the Contractor-Dealer Can do for the Central Station," after which an open forum was held prior to adjournment.

It was said that this was the most successful meeting of the Michigan State Association held in a number of years, from the standpoint of attendance, enthusiasm and interest of those who attended.

The saving of over 75,000 lives per year is due to work made possible by the little Christmas Seal.

Code Committee Meeting

The meeting of the Electrical Committee of the National Fire Protection Association which was set for October 31 and November 1 was postponed because of the threatened railroad strike at that time. Dana Pierce, chairman, has announced that this meeting will be held in New York City on December 5 and 6.

A. Penn Denton of Kansas City is chairman of the National Association's Code Committee, and in a recent bulletin to the membership he stressed the importance of this work to all electragists. He urges that all members assist him by offering suggestions that may be used for the improvement of conditions and the betterment of the National Electrical Code.

Tennessee Meeting

The tenth annual meeting of the Tennessee Association of Electragists was held at Chattanooga, Tennessee, on October 15, when the following business was transacted: C. R. Wright of Knoxville elected president; Paul W. Curtis, Chattanooga, first vice president; H. G. Street, Memphis, second vice president; J. T. Shannon, Nashville, third vice president; J. A. Fowler, Memphis, secretary and treasurer. Knoxville, Tenn., was selected for the next meeting place with the time to be later determined.

A number of interesting papers were presented to the convention among which were "Central Station Cooperation," by H. B. Whiteman—printed on another page of this issue—"Labor Conditions and the Open Shop Movement," by E. R. Wright; "Reasonable Compensation in Sale of Labor Saving Devices," by R. L. Clift—also printed in this issue—and "The Relative Advantages in Buying for Turnover and for Speculation," by I. L. Faucett.

Part of the convention sessions were held at Signal Mountain Inn, a beautiful resort on Signal Mountain just outside of the city of Chattanooga from which the meeting was adjourned to the Ocoee Club House at Parkville, Tennessee, where the convention session was concluded following the dinner on the evening of October 15. The delegates spent the night at the Ocoee Club which is operated by the Tennessee Power Company and on Sunday, October 16, the Tennessee Power Company conducted the delegates through its Tennessee River Power Development enterprises. All of the delegates were enthusiastic in

their praise concerning the benefits and entertainment features afforded by the convention.

Missouri Semi Annual Meeting

The semi annual meeting of the Missouri State Association was held at Springfield on October 22. The main object of holding this meeting at Springfield was to arouse a greater interest on the part of contractor-dealers in the southern part of the state to become members of the National Association.

A. Penn Denton of Kansas City, who is chairman of the National Code Committee, gave a talk on the work of this committee. He made a special appeal for suggestions and help from members in the revising of the Code undertaken by the National Association.

The meeting, by motion, asked each local association's representative in attendance to go back to the local association with the recommendation that the code committee study the Code with the idea of making suggestions to Mr. Denton and that such suggestions be in his hands by January 15.

Mr. Denton believed that more interest in the coming Code revision had been aroused on the part of the members of the National Association at this meeting than they had ever shown before.

There was considerable discussion on the matter of the manufacturers flooding the market with washing machines at less cost to the consumers than to the dealers without offering the latter an opportunity to unload his stock already bought at high prices. No solution was arrived at although it was the opinion of the members present that this was a case for liquidation on the part of the manufacturer, and impossible for the dealers to control or in any way take action on at the present time.

The special committee appointed to bring in a recommendation for action on the present working rules of the I. B. of E. W. reported as follows:

"Whereas, There is a rapidly growing tendency on the part of local labor organizations affiliated with the International Brotherhood of Electrical Workers to restrict the employers from selecting young men for apprentices to learn the electrical trade, thereby having a tendency to reduce the efficiency and knowledge of electrical craftsmen to the detriment of the profession;

"Therefore, be it resolved, That the Missouri State Association of Electrical Contractors and Dealers, now in conven-

tion assembled at Springfield, Missouri, this twenty-second day of October 1921, do hereby petition our National Labor Committee to present to the Council on Industrial Relations the above mentioned conditions, and to effect remedies which will permit employers of union labor to have recognition in the selection of apprentices."

A. J. Burns, secretary, reports this as a very successful meeting and was the means of starting a number of new activities in both local and state work.

Drive is on for Convenience Outlets

Manufacturers Promise to Label Packages So Public Will Comprehend

A big nation wide campaign is on for selling the public the idea of *convenience* outlets. There has been no end of discussion and publicity on the subject of *more* outlets, *adequate* outlets, and *plenty* of outlets, and yet the public is not sold.

Garnet Young, general manager of Garnet Young & Company of San Francisco, Seattle, Portland, and Los Angeles, who is a manufacturers' agent and a director of the California Co-operative Campaign, has been acting as a self appointed emissary to spread the message of convenience outlets throughout the country.

Mr. Young called at the headquarters offices of the National Association of Electrical Contractors and Dealers recently to explain his mission. He says he has been calling on manufacturers

in an endeavor to induce them to label their cartons *convenience outlets*, instead of *flush receptacles* or some term which the public never will comprehend. Mr. Young reported that he had met with encouragement throughout his trip, and those upon whom he called agreed to act upon his suggestions.

As an added attraction, Mr. Young carried with him a special request to national advertisers in the electrical field, not to present advertising which shows an appliance attached to a lighting fixture. In this mission he was also successful.

Members of the National Association should add their support to this worthy cause. As Mr. Young says, it is something that must be carried on *nationally* in order to bring the desired results. Little can be accomplished if only the members in his territory advocate this idea. Mr. Young urges members in all sections of the country to join in this national drive for *convenience outlets*.

First Annual Report

British Columbia Co-operative Association Has Successful Year

The first annual report of the British Columbia Electrical Co-operative Association has just been issued. This association was organized about a year ago with the object of promoting the electrical interests in British Columbia by developing a better understanding and a wider co-operation on the part of the various branches of the industry.

The work of educating electragists on

cost accounting and better merchandising methods was realized to be a fundamental objective, and in order to carry out such a plan the support of the state association of electrical contractors and dealers was enlisted.

Among the outstanding events of the year was the holding of an electrical show, a dinner held in co-operation with the contractor-dealer association, and a get together meeting with the architects and leading house builders of the city.

Plans for the coming year include a campaign for better lighting to reduce the danger of street accidents, to increase the productivity of factories, and increase the effectiveness of merchandising display. An industrial lighting exhibit will be opened in Vancouver at an early date and steps will be taken to promote this branch of the business both among the trade and local industries.

The report states there is a prospect of extending the scope of the association to other parts of the province. Victoria contractors and dealers are already interested in what is being done in Vancouver and there is no doubt that the benefits of the movement will be sought by other localities, such as Prince Rupert and the interior. There is no reason why within the next year or two the electrical interests of British Columbia should not be knitted together as a unit not only for promotion of their own welfare but for the advancement of electrical development generally.

Denver Electrical League Meeting

A most enthusiastic meeting of the Electrical Co-operative League of Denver was held at the Metropole Hotel in that city the night of November 3rd. With over a hundred representatives of all branches of the electrical industry present a dinner accompanied by special musical entertainment followed by an impromptu program of talks made up what has been recorded as a red letter night for the industry in that part of the Rocky Mountains.

On account of the co-operative advertising campaign just having been launched in Denver, an excellent opportunity was presented for going over the campaign. The fact that the contractor-dealers were represented in the campaign by 95 percent of their members was complimented by A. C. Cornell, chairman of the publicity committee



Window of the Levy Electric Company, San Francisco, Showing a Popular Heater Display

and manager of the intermountain territory for the Western Electric Company, Inc. The seven electrical jobbers and the central station have joined with the electragnists in putting on a campaign of four months' duration, it was reported.

The progress of financing, building, equipping, and arrangements for displaying the electrical home which is now being built in Denver under the auspices of the League, were discussed.

Among those who gave short talks were H. Alex Hibbard, A. E. Phinney, W. A. J. Guscott, L. M. Cargo, H. D. Randall, E. C. Headrick, B. C. J. Wheatlake, S. W. Bishop, P. J. Sullivan, the contractor who is building the house, and A. L. Callopy, representing the advertising agency which is conducting the cooperative advertising campaign for the League.

T. O. Kennedy presided and the committee in charge was Clarence Keeler, H. Alex Hibbard and J. W. Hyall.

First Yearly Report

Fine Results Shown Through Work of Electrical Co-operative Association of Quebec

A synopsis of the activities of the first year's work of the Electrical Co-operative Association Province of Quebec shows that much excellent work has been accomplished. It was the general feeling when the Association was inaugurated that considerable difficulty would be experienced in instilling the co-operative spirit into the minds of the members of the industry at large since the work would have to be carried on with the use of both the French and English languages. It was found, however, that these problems offered little resistance and it is believed that both

nationalities have realized equal benefits from the work that has been done.

Among other things the Association was instrumental in causing certain rules to be formulated and approved by the Canadian Fire Underwriters and it has done much to educate the public to the use of electrical equipment and appliances, considerable data and publicity having been distributed. In September of this year a permanent electrical exhibition was opened up in Montreal through which members could put forth extensive co-operative effort. An electrical home was also opened in September in Model City and it is estimated that nearly 20,000 persons visited this home during the five week's time it was open to the public.

Although activities of the Association were largely confined to the city and district of Montreal, nevertheless the Association became established in the city of Quebec and in the future it hopes to energetically carry on promotional work in other large centers throughout the province.

Cleveland's Third Home Electric

On November 13 the third electrical home in Cleveland closed its doors to the public. This home has been open since October 16, and each day visitors were permitted from one o'clock in the afternoon to ten o'clock at night. Its location on Shelton Avenue, East Cleveland, made it easy of access and as it was extensively advertised in the leading newspapers, many who did not see the other two electrical homes attended this one.

Under the able direction of Campaign Director Jack North, considerable interest was aroused through new channels.

Special appeals were made to girls attending domestic science classes, members of women's clubs, and school and college teachers. It was thought these would be good sources through which to promote and develop the adoption of things electrical.

Because of its smaller size the third home could not compare in the number of visitors with the other two, but from all other standpoints it was fully as successful.

Canadian Electragnists Meet

The Hamilton District of the Ontario Association of Electrical Contractors & Dealers held a meeting in the Royal Connaught Hotel on October 17. There was a large turnout of members and their friends. K. A. McIntyre addressed the meeting.

The election of permanent officers was conducted by K. A. McIntyre, chairman of the Ontario executive committee. J. Culley, W. G. Jack and J. A. Dynes were elected executive committeemen and Mr. Jack was elected to represent the Association on the Ontario executive committee. Richard Farr of the Arcade Limited was appointed permanent publicity agent for the Association.

The various committees made very favorable reports and through the committee on publicity a set of electrical pages will be shown weekly in the daily papers.

New Name Approved

Among the many complimentary letters that have come in on the change of name is a communication from Frank H. Stewart, the well known jobber of Philadelphia. Evidently Mr. Stewart has thought long and often on just such a term as the word electragnist implies for he points to his address made in November 1920 before the New Jersey State Association, when he said:

The name Electrical Contractor should be abandoned by the National Association of Electrical Contractors and Dealers as well as by individuals. A prize of ten thousand dollars should be offered for a name to be used by combined contractors and dealers. The adopted name should be copyrighted and only used by those affiliated with the organizations adopting it. By this means a name worth a great deal like the word Mazda would achieve a certain standing that would materially help all concerned.



Get Together Dinner of the Hamilton District Electrical Association Held on November 2 for the Purpose of Inaugurating an Electrical Development Campaign

N. E. L. A. Hand Books

Being Supplied by Committee at Practically Cost of Printing

The electrical salesman's hand book committee of the National Electric Light Association has been engaged in making revisions of its various endeavors. Two booklets that have already been issued are "Industrial Lighting" and "Lamp Equipment for Commercial and Industrial Lighting."

The first named gives the information about industrial lighting which every salesman should have, and is sure to be helpful to contractors, jobbers, and retailers, as well as to central station salesmen. It tells where to look for industrial lighting business; how to go after it; why a manufacturer should have good lighting; what is good lighting, and how to produce it. Technical terms have been avoided. It is written for salesmen rather than for engineers. Many illustrations enliven and clarify the pages. Tables are included where needed. It is both a text book and a reference book. The foremost specialists in the field of illumination have contributed to this work. Every sales manager should see that his salesmen are supplied with it.

The other booklet is a complete index of the principal types of fixtures, reflectors, and other incandescent lighting units, showing their forms and characteristics, the class of lighting to which they are adapted, and the make. The book, as cross-indexed, makes it convenient to refer from the equipment to the application and vice versa. It is un-

questionably the most complete work of its kind so far published.

The reports of the industrial lighting exhibits held in all parts of the country show that progressive industries are taking advantage of the lull in business to overhaul and modernize their plant equipment. The same reports indicate a tremendous field for better commercial and industrial lighting. These booklets will enable you to fully capitalize the existing situation.

Since the compilation and writing of the text is contributed without charge by leaders in the lighting industry, these books are made available at a price that is no more than the cost of printing and mailing.

Progressive electricians should get copies of these valuable booklets. Send orders to A. J. Marshall, Commercial National Section, N. E. L. A., 29 West 39th Street, New York City.

New Committee Formed

A new committee has been formed on Electrically Equipped Furniture. Joseph F. Becker, sales manager of the United Electric Light & Power Company of New York City has been appointed chairman and has selected the following as members of this committee:

R. S. Hale, Edison Illuminating Company of Boston; Samuel Adams Chase, Westinghouse Merchandising Bureau, New York City; F. C. DeReamer, General Electric Company, Bridgeport, Conn.; O. H. Caldwell, Electrical Merchandising, New York City; Dana

Pierce, Underwriters' Laboratories, New York City; L. L. Strauss of New York City; E. Cantello White, Electric Outlet Company, New York City; C. Hill Griffith, Society for Electrical Development, New York City; Chris, Litscher, The Litscher Electric Company, Grand Rapids, Mich.; C. W. Johnson, United Appliance Company, Jackson, Mich., and H. M. Muller, N. O. T. & Light Company, New Orleans, La.

This is an important committee and the work and subject should be of the utmost importance to the members of the National Association for the reason that it should stimulate better wiring and additional convenience outlets.

A Timely Ad

In developing early Christmas buying W. J. Ball, manager of the Tri-City Electric Company, Moline, Illinois, has expressed the following thought in his newspaper advertising for the Tri-City company:

"We thought last Spring that our order tree would develop into a century plant—but it didn't. We watered it with courtesy, service, quality, price—and it blooms every day. It will be some Christmas tree."

New Officers Appointed

At the Windsor district meeting of the Province of Ontario Association held on November 1 the following members were appointed to office: executive committee, V. B. Dickeson of the Barton Netting Co.; J. Garford of the Electrical Supply Co., and J. D. Reaume.

Mr. Dickeson was appointed district chairman and elected representative on the provincial executive committee. A. H. Cook was appointed secretary and treasurer.

Included in the discussions at this meeting was the question of a membership campaign and the matter of the Licensing Act.

Complete File of Magazine

In writing to the editor of the NATIONAL ELECTRICIAN, Charles L. Eidlitz of New York City, the first president of the National Association, says:

"It may be of interest to you to know that I now have complete volumes of the entire twenty years on a stand to the left of my desk, and I am wondering how many of the members have the complete set right at hand today."



Interior Display of the Walker Electric Co., Raleigh, N. C., the Arrangement Being Suggested by Wm. L. Goodwin—Note the Suspended Ceiling in Fixture Show Room Which is Ten Feet High

Approves of National

Western Editor Points Out Value of Broader Affiliations

In a leading editorial, the *Journal of Electricity* in its issue of November 1, refers to a previous issue in which it had severely criticised the National Association of Electrical Contractors and Dealers. Evidently the editor of *The Journal*, which by the way is published in San Francisco, California, realized that his previous editorial either was misunderstood or misinterpreted by his readers, so he hastens to correct any wrong impressions. The following excerpts from the later editorial in question are to the point and doubtless set forth the editor's true belief:

"We believe in national organization. No state and no district stands alone in its problems. We do not believe that the West can solve the Japanese problem, nor the South the free trade problem, nor the northeast the fuel problem single-handed. The West in particular, with its tremendous promise of growth, needs not only the advice and wisdom of the rest of the country which has already had to meet some of the problems we are now facing, but needs as well the financial backing which comes with interest and good will.

"We believe in national organization. We cannot get along without it. We believe that it is worth what it costs to support for the sake of its national influence, even if there were no concrete return to individual sections. More selfishly, we recognize the constructive pioneer work which national organizations are carrying on in backward territory and we recognize that in some respects the West may be regarded as backward. We deplore the break in national affiliations which has been thought necessary by certain western organizations. We believe it to be but temporary—just as are the other frictions which rise to the surface in all organizations from time to time."

To Hold Meeting

The annual convention of the Wisconsin State Association will be held at the Republican Hotel in Milwaukee for three days from January, 24, 25 and 26. Those in charge are planning to make this one of the most interesting meetings the State Association has ever held.

Group Advertising

First Co-operative Campaign In Denver Begun by Electric League

So much has been said of late of the value of coöperative advertising that the electrical interests of Denver, always firm believers in the movement, have crystallized their sentiments into action. Through the Electrical Coöperative League of that city a campaign was launched early in November to run for four months.

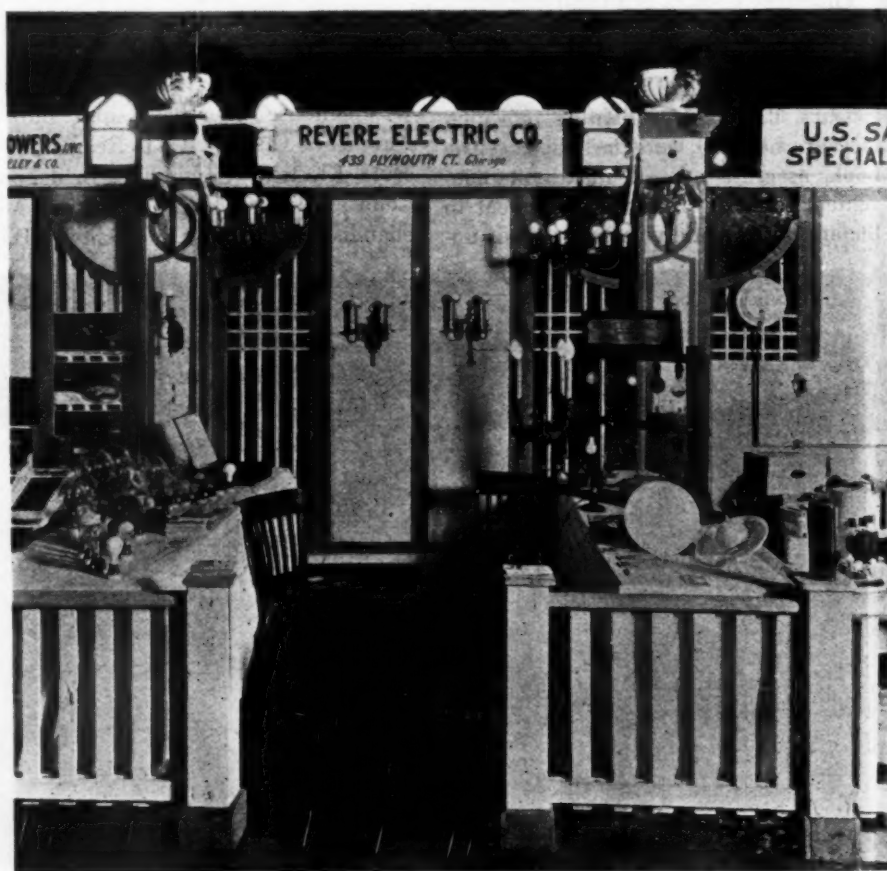
Manufacturers, jobbers, the central station and the majority of the contractor-dealers are participating in the campaign which has been laid out to serve a double purpose, to emphasize the idea of Make This an Electrical Christmas and as a feeder to the special campaign advertising the exhibition of Denver's fully equipped electrical home which will be displayed shortly after the holidays.

Financing the campaign has not been difficult, according to A. C. Cornell, chairman of the league's publicity committee. A quota of five thousand dollars was set up, divided into three groups—one thousand dollars from the manufacturers and jobbers, two thousand dollars from The Denver Gas and

Electric Light Company, and two thousand dollars from the contractor-dealers, which was underwritten by their local association through E. C. Headrick, the president.

Individual subscriptions in the first and last groups were based on the relative amount of gross business done between July 1, 1920 and June 30, 1921. In the case of the electragists, their individual quotas were based on one-fourth of one percent of the gross business done during the same period. Collection of funds for the first thirty days' operations was made in advance and no dealer, unless a paid-up member of the association, could participate in the co-operative advertising proper. Every encouragement has been given to insure as much tie-in copy as possible and the total is sufficient to warrant a complete electrical page in the newspapers, which is the only medium used in the campaign.

A local advertising agency is handling the campaign. The copy is being prepared in advance so that all contributors will be acquainted with the motive of each ad and proper tie-in copy can be prepared. The Coöperative League emblem featuring the caption Do It Electrically is being emphasized along



The Revere Electrical Company of Chicago, Specialists in Hotel Lighting, Aroused Much Interest in This Display at the Recent Hotel Exposition in the Coliseum at Chicago

with the slogan Make This An Electrical Christmas.

Campaigns as conducted in other cities and data in the trade journals have been carefully analyzed in order that every advantage can be had in making the campaign a success.

Advertising Campaign

Resulting from the efforts of the local district association, electragists of Hamilton, Ontario, recently worked out a co-operative advertising campaign. This campaign was extensive and in one issue of a Hamilton daily four complete pages were devoted to the displays of the various interests, these displays tying in well with editorials which referred to the science of electricity and how it is being harnessed and used as the most economical and efficient means for operating the many labor conserving devices in the home.

The local district association proposes to inaugurate an electrical development campaign in the city of Hamilton which will be carried on by the Electrical League and a successful get together meeting was held on November 2 to get the project under way.

Reduced Prices on Fixtures

The Lighting Fixture Dealers' Society has again put over a piece of profitable work for its members and is pleased to announce a list of package charges on glass that shows a twenty percent reduction from the prices in vogue March

1st, 1921, and is corrected up to and including October 7th, 1921.

The Package Committee of the Illuminating Glassware Guild, through Thomas Howard, its chairman, co-operated with the society in furnishing the new schedule.

Inspectors Meet

The Seventeenth Annual Convention of the Western Association of Electrical Inspectors will be held in Chicago at the Hotel Sherman, January 17, 18 and 19, 1922.

Milwaukee Joint Convention

The 1922 Lighting Fixture Market will be held in Milwaukee from January 30 to February 5. This is the third annual convention of the Market and as in the past two years it will be held jointly by the National Lighting Fixture Manufacturers, the Dealers' Society of America and the Illuminating Glassware Guild.

From all appearances the convention of 1922 will greatly surpass any of the other conventions both in attendance and in the number and beauty of the exhibitions. Many exhibitors have already reserved space.

It is expected that convention meetings will be held during the mornings, while the afternoons are devoted to the Fixture Market, the same as the highly successful meeting at Buffalo in February.

A Better Lighting Week will be held during the convention to promote better lighting, and a Pageant of Light will show the evolution of lighting methods from the beginning to the present.

To all those interested in better lighting the Convention Week at Milwaukee will be full of instruction, amusement and interest.

Making Profit Out of Loss

J. L. Wolf, secretary of the Lighting Fixture Dealers' Society of America, sends the following letter:

I have read with interest your fiction story on page 53 of the November NATIONAL ELECTRAGIST and if Mr. Volt would just join the Fixture Dealers' Society, we would show him how to collect about \$25,000.00 as hanging charge on the 5,427 free fixture hanging jobs that his sales department gave away.

We would be pleased to give your

writer the information on this matter, so that he could write another fiction story, which would show the dealer-contractor how to bring profit out of the seemingly loss.

Favorable Comment

In a letter commenting on the change of name and on the article "Service Engineers Help Gain and Retain Customers" in the November issue, Paul H. Jaehnig of Newark, N. J., says: "It might interest you to know that in the first place, I have been using the term Electragist in connection with my business and have done considerable newspaper advertising to popularize the word; and in the second place I have been operating a House Wiring Department on the part payment plan which has been meeting with considerable success."

ELECTRAGIST "The Home Electric"

Make This Possible By Consulting Us About
Having Your Home Wired and Equipped
with Fixtures

On the Monthly Payment Plan

Our Lighting Engineers Will Tell You What
It Will Cost.

OPEN EVENINGS FOR YOUR CONVENIENCE

Paul H. Jaehnig, Inc.
Electragists

109 Bank St. (at Plane St), Newark.
Tel. Market 8407-8408

WE COVER NEWARK AND SUBURBS

The accompanying illustration is a sample of the kind of newspaper advertisement which Mr. Jaehnig uses, and his plan will be found worthy of adoption by other electragists.

Lighting Fixture Standards

"Giving 'em Fits" is the specialty of Mr. D'Olier, the standardization engineer of the National Council Lighting Fixture Manufacturers. For several months he has been steadily at work interviewing lighting fixture manufacturers, investigating present locally used standards, and from the information thus obtained evolving a standard which will retain the advantages of those already in use while at the same time making into line as little inconvenience as possible.

The idea behind the National Council's plan is not to create an entirely new set of standards, set up by Mr. D'Olier, but to take something which lighting fixture manufacturers have already proved to be effective through years of experience and then to make that a standard



As Soon as Mr. Lane, Secretary of the Walker Electric Company, Returned from the Buffalo Convention He Found a New Sign Being Put up and He Immediately Had the New Name Inserted

for the entire trade. As a matter of fact you can't set up a permanent standard in any other way because people won't use it if it isn't practical.

The advantage of this standardization to the fixture dealer is undoubted. It will eliminate sloppy, fits, noninterchangeable screw threads, and other troubles which so often occur under present conditions. It will enable one manufacturer to draw upon another for parts in order to deliver rush orders. And last but by no means least, it will mean better fixtures and therefore more business for us all.

Dealer Advertising

Since the average electragist must devote so much time to the different ends of his business that he can give but little thought and time to the writing of advertisements for his local newspaper, the Beardslee Chandelier Manufacturing Company of Chicago recently mapped out a complete advertising campaign for its dealers.

The response of the dealers show that they are in hearty accord with such a practice on the part of the manufacturer. Fred R. Farmer, president of the company reports that upwards of three hundred took advantage of the offer and over seventy percent requested that cuts be forwarded for the complete series of advertisements.

Electrical Day Meeting in Denver

An Electrical Day was featured at the weekly meeting of the real estate bureau of the Denver Civic and Commercial Association, November 2, at which the Denver Electrical Coöperative League had charge of the program. The part electricity is playing in the home, the education of the public in things electrical, and coöperation between the real estate interests and the electrical industry were stressed.

T. O. Kennedy, chairman of the League's advisory committee, explained the electrical home movement and showed the realtors where every dollar spent in the electrical equipment of a home added four dollars in value to the selling price of the property.

The personal experience of A. C. Cornell, chairman of the publicity committee of the League, in moving into an extremely desirable house supposedly modern but without any convenience outlets, was related by him as an example of the manner in which the majority of new homes have been constructed.

The nature and the activities of the Electrical Coöperative League were explained by S. W. Bishop, executive manager of the League.

Nearly a hundred prominent real estate men attended the meeting. Many representatives of the electrical industry were also present and gave support to the messages of doing things electrically.

An Outstanding Figure

T. O. Kennedy of Denver is Prominent in Electrical Industry of all Rocky Mountain Region

According to reports from Denver, there is one man who stands out for his all around interest in every phase of the electrical industry in that city. He



T. O. Kennedy

is T. O. Kennedy, chairman of the Advisory Committee of the Electrical Coöperative League and general superintendent of The Denver Gas and Electric Light Co.

He is head of the committee which is building Denver's first fully equipped electrical home and at the same time is directing the affairs of the Rocky Mountain Division of the N. E. L. A. as its newly elected president.

Mr. Kennedy is the past chairman of the Electrical Bureau of the Denver Civic and Commercial Association and has for some time directed the division committee on public utility information.

Missouri claims Kennedy as a native son. He was born at Poplar Bluff in 1886 and received all his education in that state, graduating from the University of Missouri as an electrical engi-

neer in 1907. He started with Henry L. Doherty at that time and since has been in charge of several of the company properties. "Ted," as he is known to his associates, is a real live wire.

Public Utility Report

The Illinois Committee on Public Utility Information under date of November 1 issued a report of its work since its inception. This report urges public utilities to further organize and to coöperate on a greater scale.

The Illinois Committee was organized in the spring of 1919 for the purpose of informing the public on the fundamentals of the public utility industry, to the end that better understanding may tend to facilitate the development of utility services for the people of the state.

News Notes Concerning Electrical Contractor-Dealers

Business Changes, Store Improvements, and New Establishments Opened

L. L. Strauss Electric Company is now located in its new building at 422 West 42nd Street, New York City, where larger quarters and better facilities will enable it to carry a full line of electrical goods.

Gratiot Electric Company of which Ruthmier and Fischer are proprietors, is reported to have opened a new electrical store at Gratiot Avenue and Harrison Street, Saginaw, Michigan.

Midland Electric Company has opened a new supply business at 2425 Maplewood Avenue, Toledo, Ohio. Incorporated capital, \$10,000. Incorporators: H. Ackerman and others.

Siegel Electric Company formerly located at 406 Sixth Avenue, New York City, has removed to 133 West 37th Street, where it is doing a general electrical contracting business. It will be interested in receiving catalogs of various electrical appliances and electrical wiring devices.

Heath Electric Company is opening an appliance store at Du Quoin, Illinois.

S. Greenberg will open a new store carrying a full line of house furnishings and electrical supplies at 4027 Broadway, New York City.

Hartford Electric Company has opened a new supply store at Dunkirk, Ind.

W. M. Rogers and S. S. Whiting have opened a new electrical appliance business at Blick, Oklahoma.

The Porter Electric Store will open at 941 East 152nd Street, Cleveland, Ohio. A full line of electrical goods will be carried.

M. R. Vos has opened a new electrical appliance store at Allegan, Mich.

S. J. Chapman Company is opening an electrical supply store at 217 No. Market Street, Marion, Illinois.

Earl Sanders is reported to have opened a new electrical appliance store at 88 North Fair Oaks, Pasadena, California.

R. E. McCaskill and B. Morris have opened an electrical appliance business at Electria, Texas.

Renter Electric Company will move to larger quarters at 34 East Sixth Street, Cincinnati, Ohio, where a full line of electrical appliances will be carried.

M. Skidmore and Guy Gardner will open a new electrical appliance store at Healdton, Oklahoma.

W. E. Baird has opened an electrical supply store at Alder Street, Pullman, Washington.

Huey and Burroughs have opened a new electrical appliance store at Waukon, Iowa.

George R. Field is opening a new store carrying a full line of electrical appliances at Columbus, Kansas. Investment, \$1,500.

St. Clair Electric Company will open a new appliance business at 608 West Main Street, Belleville, Illinois.

New York Electric Fixtures Company is reported to have opened a new supply store at 308 Hastings Street, Detroit, Michigan.

R. C. Lancaster has opened an electrical supply store at Pierceton, Ind.

Focht Electric Company is opening a new supply business at Cleveland, Ohio. Incorporated capital, \$30,000. Incorporators: H. E. Varga, 1834 East 19th Street, and others.

The Electric Shop of which Morby Brothers are proprietors, has opened at American Falls, Idaho, where electrical supplies will be carried.

The Mathes Electric Company is opening an appliance store at 88 North Fair Oaks Avenue, Pasadena, California.

L. F. Smith and Lawrence Stokes have opened a new plumbing and electrical appliance store at Kenneth, Missouri.

Hudson Electric Appliance Company of which Ridgley Hudson is proprietor, will open a new appliance store at 404 South Sixth Street, Springfield, Ill. Stock, \$6,000.

The Unity Electric Company has opened an electrical business at West Unity, Ohio. Incorporated capital \$100,000. Incorporators: Frank M. Cobourn and others.

Field & Davis Electric Shop is reported to have opened at Princeton, Illinois. Electrical supplies will be carried.

A. C. Bronning will open a new electrical appliance store at Fond Du Lac, Wisconsin.

O. A. Canfield has opened a new store carrying a full line of electrical appliances at Main Street, Adair, Iowa.

Shelby Electric Company opened a new appliance business at Memphis, Tennessee. Incorporated capital \$15,000. Incorporators: A. J. Calhoun, 449 Garland Street, and others.

Buckeye Electric Company is opening a new supply business at Lima, Ohio. Incorporated capital \$10,000. Incorporators: A. E. Henry and others.

Gus Cipriani has opened a new electrical store at High Street, Clinton, Mass.

Domestic Electric Appliance Company of which Mason, Wren and Matteson are proprietors, is opening a new appliance and lighting fixture store at 83 North Main Street, Gloversville, New York.

A. E. Donahey will open an electrical supply store at 2487 Cleveland Avenue, Columbus, Ohio.

F. S. Truax has opened a new store carrying electrical supplies at Hortonville, Wisconsin.

S. W. Radio Company is reported to have opened an electrical appliance store at 422 Gay Street, Knoxville, Tennessee.

Lorens and Lehmler are opening an electrical contracting business at Tremont, Pennsylvania.

Brown and Green have opened a new electrical supply store at 786 Seventh Avenue, New York City.

Haskell Electric Company is opening a new appliance store at 280 High Street, Holyoke, Mass.

Eicherly and Droll will open an electrical supply store at 3310 Germantown Avenue, Philadelphia, Pa.

Hall Electric Company has opened a new store carrying a full line of electrical supplies at 308 East Kirkwood Avenue, Bloomington, Indiana.

Electric Wiring and Insulation Company is opening a new contracting business at 11 West 29th Street, New York City.

Herman White is reported to have opened a new electrical store at 47 Main Street, Bangor, Maine.

Globe Electric Company has opened a new supply store at 707 Broadway, Bayonne, New Jersey.

C. A. Grumbling is opening an electrical appliance store at Barnesboro, Pennsylvania.

Kyle and Hall opened a new electrical store at 1219 Main Street, Niagara Falls, New York.

International Electric Supply Company of which J. W. and W. H. McNair are proprietors, opened a supply store at 1114 Helene Avenue, Plainfield, New Jersey. They are looking for a local store to open new retail business about January 1st.

G. H. Murray has opened a new plumbing and electric supply store at 701 East Long Street, Columbus, Ohio.

Kaskie Electric Company will erect a new building at 3606 Sixth Avenue, Des Moines, Iowa, where it will conduct its new supply business.

Conduit Electric Supply Corporation has opened a new supply business at 204 West Jefferson Street, Syracuse, New York. Incorporated capital \$30,000. Incorporators: Jacob G. Smith, 508 Crossott Street, Arthur H. Poole, 431 Stolp Avenue, and others of Syracuse.

Gate Electric Light & Power Company will open a branch electric appliance store at Jennings, Oklahoma.

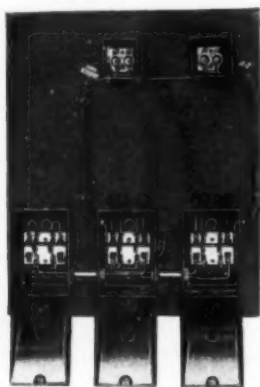
Smith and Howley Company will open a branch electrical contracting business at 42 West Market Street, Wilkes-Barre, Pennsylvania. In business at Scranton, where C. Thomas Simpkins is local manager.

Volz-Secore Company in the electrical fixture and appliance business at 39 Jackson Street, Batavia, New York, will erect new building to cost \$23,000 at 43 Jackson Street. Work started November 1st.



Ready Unit Meter Board

The electric meter board has recently gone through a marked degree of evolution. The first step towards making the meter board a standard unit was



the introduction of the safety cabinet with its universal features. The Baum Electric Company of Newark, New Jersey, has gone one step further by standardizing the RED E UNIT meter board as a universal unit.

The RED E UNIT, an assembly of standard equipment neatly mounted on a board coated with insulating paint, is made for installations not exceeding six meters. For installations of more than one meter it is provided with a bonding clamp on the fuse boxes, thereby eliminating any exterior conduit bonding connections. It has the service conduit metallicity connected to the circuit conduit by a patented clamp which may be readily removed when a common conduit ground is not permissible. The board is drilled so the service conduit may enter through any of the rear knockouts of the service cabinet. With the RED E UNIT it is never necessary to return to an installation in cases where the meter board must comply with a local ruling, as the RED E UNIT is said to comply with all rules and all regulations in all places. In the RED E UNIT is perfected a universal meter board which effects the utmost in both efficiency and economy.

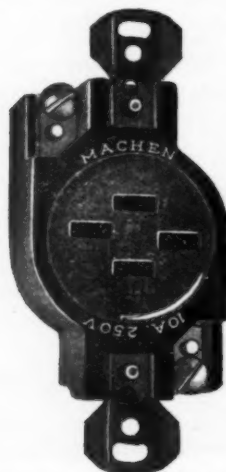
The accompanying illustration shows

a two meter-unit for an installation of either overhead or underground service at a potential 110 to 220 volts for not more than 30 amperes.

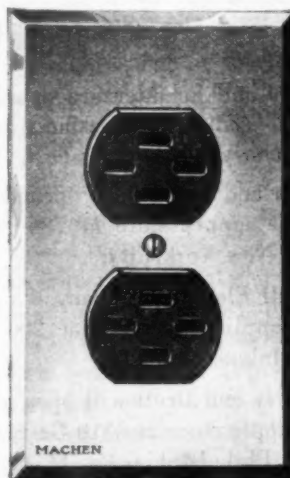
Standard Receptacles

The Standard and Duplex Receptacles illustrated herewith are a development of the Machen Electric Manufacturing Company of Bridesburg, Philadelphia, Pa.

One of the principal features of these receptacles is the fact the contacts are



concealed under a shoulder of the porcelain base so that it is impossible, when inserting a plug in the receptacle, to come down on top of the contacts with the prong of the plug with the danger of bending the contacts or the plug.

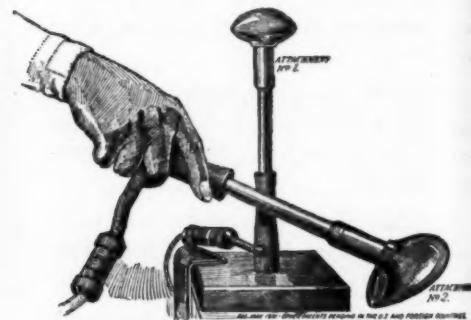


This construction also allows of the use of narrow slots in the face of the receptacles thus tending to keep out dust and dirt from the contact chambers.

These receptacles will fit in shallow partitions and are designed for any standard outlet box.

New Electric Iron

The Electric Tommy Iron is a new product manufactured by the Tommy Iron Manufacturing Company of St. Louis. It is a marvel of speed, convenience and efficiency for every possible ironing purpose of milliners, dress-makers, housewives and hat manufacturers.



This device is most effective in the design of new style creations, shaping folds and giving the correct curve to bias flanges and brim coverings. Soft crowns are readily shaped and dents and creases are instantly removed. It works well on hair braids and can be used for reblocking, ribbon trimming and in many other ways.

Made of the finest materials and workmanship, the Electric Tommy Iron is guaranteed to give highly satisfactory results. It comes complete with attachments for upright and flat surface ironing.

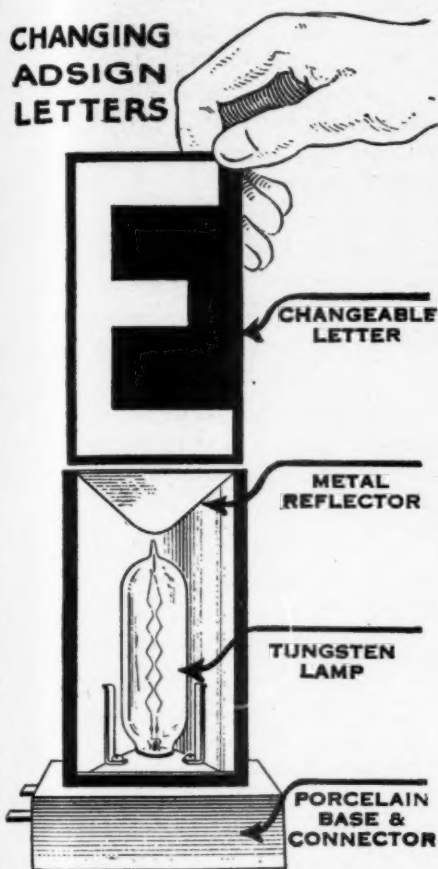
Electric Letter Sign

Among the notable examples of electric letter sign development is the Adsign, a product of the Adsign Corporation of New York City. This sign is composed of interlocking units, each

letter being interchangeable as shown in the accompanying illustration.

No special connections are necessary to install the Adsign, which is portable

CHANGING ADSIGN LETTERS



and is used chiefly for indoor display and advertising purposes. Letters show up as well in the day as they do at night when illuminated.

Each unit measures 5 inches high by $3\frac{1}{2}$ inches wide over all; the letter itself is 4 inches high. Fifteen letters require less than five feet of space, and by interlocking a series of units a complete display sign is quickly made up.

Electric Vibrator

The P. A. Geier Company of Cleveland, manufacturers of the Royal Electric Cleaner and other appliances, announces a new special model of their Royal Vibrator. Realizing the trade's need for counter display packages which will attract attention and serve as silent salesmen, they have devised for this appliance the container illustrated herewith. When the box is open the inside cover space usually wasted and yet so valuable for display purposes is used for the trade mark and price announcement.

The new vibrator is furnished complete with four highest grade applicators, eight feet of reinforced multiple

strand cord and an oiler. The instrument itself has all the fine features of the regular Royal Vibrators, is light



in weight, carefully balanced and runs smoothly. Its high powered motor is equipped with a patented control so that speed and strength of vibration can be adapted exactly to the individual needs of the user.

Cable Support

With the increase in height of buildings it was not long before the lighting and power cable weights, in vertical runs, exceeded the breaking weight of the cables. Therefore various forms of supports were designed to relieve the cable of the strain. Attention was



called to the importance of correct design in cable supports by the failure of a homemade support in one of the important buildings in New York City, when a serious fire damaged the main circuits of the building. As a result of this experience Russell & Stoll of New York City were called upon to design

a cable support that would eliminate the disadvantages of the method previously used and accomplish the result in a satisfactory way.

The support developed is shown in the accompanying illustrations, and consist of a malleable iron collar the outside diameter of which is not larger than a standard conduit bushing. This



collar is screwed onto the upper end of the conduit riser in which the cables are to be supported. After the cables are drawn through, fiber tapered bushings with interior surfaces threaded, are fitted snugly over the cables at the point where they pass through the cable support. Then specially shaped wedges are dropped into the retaining collar and the tapered bushings allowed to settle into corresponding tapered holes in these wedges. The result is that the weight of the cable tightens the grip of fiber bushings which carry the weight of the suspended cable within the iron retaining collar.

Portable Flood Light

A Portable Flood Light using a 250-watt, G-30 Flood Light giving a powerful beam of white light that can be equipped with a heat resisting glass for color lighting, has been developed by the National X-Ray Reflector Company of Chicago.



This is a development of the well known type of projector that was designed for flood lighting the Woolworth Building, New York City.

As a portable flood light this is used extensively for automobile salesrooms, spotlighting cars, etc. It can be used outside just as effectively, since it is perfectly weatherproof.

New Insulating Board

Celotex is the name of a new building board which is being manufactured at New Orleans. This board is made from waste sugar cane and is usually twelve feet wide, three-fourths of an inch thick, and in lengths up to nine hundred feet. The first of a series of manufacturing plants was recently completed.

This board is different from any other wall or insulating board on the market as it is much stronger due to the long fiber which it contains. At the same time the insulating qualities are very high and it has all the characteristics of the best insulation and wall boards with the addition of several other good qualities.

Cord and Tumbler Switches

A new line of wiring devices including several types of switches and connectors for household electrical appliances and motor operated devices has been developed and placed on the market by the General Electric Company.



The G. E. Compound Through Cord Switch is made in a pattern which easily fits the hand. The circuit is opened and closed, not by pushing in a button but by rotating a corrugated lever with the thumb as the switch is held in the hand. It is made of black composition, is neat in appearance, compact in size, and has a quick make and break action which eliminates the danger of burnt contacts when opening the circuit on excessive loads.



For use on automobiles, washing machines, ironing machines, dish washers, etc., where a small switch is desirable, this new miniature single pole flush tumbler switch has been devised. It has the same positive quick make and break

mechanism described above, and is entirely enclosed in a composition box as shown.

Condensed Notes of Interest to the Trade

Six very attractive folders were recently issued by Pass & Seymour, Inc., Solvay, New York, setting forth the wiring devices of this company, entitled as follows: "For Ceiling Lights"; "The Dainty Gift Lamp"; "Porcelain for Service"; "The Truth Concerning Pull Switches"; "A Fixture Switch"; and "Alladin Sockets." These are issued for use by electricians.

Commenting on the action of one or two manufacturers who have adopted the plan of publishing net prices instead of list and discounts, A. H. Warner, Jr., vice president of the H. B. Sherman Manufacturing Company of Battle Creek, Michigan, says his company voluntarily adopted this method several months ago.

Charles Schneider, formerly superintendent in charge of electrical construction of the Robbins & Myers Company, Springfield, Ohio, has been appointed general factory superintendent. Mr. Schneider joined the Robbins & Myers Company in 1898 and wound and assembled with his own hands that year, the first power motor ever built by the company.

A leaflet descriptive of the new circulation type standard electric water heater, which manages the heat, according to the manufacturer, so that it is utilized with the utmost efficiency, has just been issued by The Standard Electric Stove Company, Toledo Ohio.

The Belden Manufacturing Company of Chicago, announces the appointment of C. P. Cushway to be manager of the cable and specialties department. Mr. Cushway will have supervision over telephone, automobile and appliance cord assemblies, cordage, flexible cable and insulating materials.

D. K. Chadbourne has been appointed manager of the New York Office of the Westinghouse Electric International Company. Mr. Chadbourne came to the Westinghouse Company through the George Cutter Company before it was affiliated with the Westinghouse, as he was successively western district manager and eastern district manager of the latter company from 1912 to 1920, when he joined the Westinghouse Electric International Company.

Fred B. Uhrig, for the past forty years an employe of the Western Electric Company and known in practically every section of America's electrical circle, has retired from active service.

The Beardslee Chandelier Manufacturing Company of Chicago has issued three leaflets, two describing ceiling rings, and the Safety-Board Holder, and one containing a new price list on illuminating glassware.

Announcement is made of the appointment of E. L. Callahan as sales manager of the Westinghouse Lamp Company, to be located at its executive offices in New York City, succeeding Elliot Reid, resigned.

A new folder has been issued by the Beardslee Chandelier Mfg. Co. of Chicago for use of Denzar jobbers and dealers.

Harvey Hubbell, Inc., Bridgeport, Conn., has issued a new folder on Toggle Switches.

The following publications have been issued by the Westinghouse Electric & Mfg. Company: A review of electric railway problems, an aid in discussions on the various phases of transportation; and Vol. III, No. 1 of electrification data, treating of the economies of railroad electrification, including a portion of the progress report made by the Super Power Survey to the Ex-Secretary of the Interior.

This company has also issued the following leaflets: "Electric Motor Drive for Power Pumps," giving a discussion of the advantages of electricity for this work, specifically pointing out the type of motor to be used; "Lead Base Babbitt Metal," announcing the placing on the market of this metal; and a leaflet describing and illustrating enclosed float switches.

P. G. McConnell, formerly a department manager of the Belden Mfg. Co., resigned October 31 to enter the field for himself. He will specialize in the manufacture of automobile timer sets, attachment, and special cords and connectors at 426 South Clinton Street, Chicago, Ill., doing business as the McConnell Cable and Specialties Co.

WHEN you want information or data write the National Office. It is maintained for your use.

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